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(54)【発明の名称】電話回線の制御委譲システム

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(57)【特許請求の範囲】

【請求項1】通信事業者が提供する通信サービスについての制御を行うホストコンピュータと、前記ホストコンピュータが識別可能な親ＩＤ情報を有する親端末機と、前記ホストコンピュータが識別可能な子ＩＤ情報を有し、前記親端末機からの制御の委譲を受けて前記ホストコンピュータとの通信を行う複数の子端末機を有し、前記親端末機は、各子端末機と通信を行う第1の通信手段と、前記第1の通信手段により通信を行った子端末機の中から、制御を委譲しようとするn個(nは1以上の整数)の子端末機を選択する選択手段と、前記第1の通信手段を制御する制御手段とを有し、前記子端末機は、前記親端末機と通信を行う第1の通信手段と、前記ホストコンピュータと通信を行う第2の通信手段と、前記第1の通信手段と前記第2の通信手段と

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を制御する制御手段とを有し、前記親端末機の前記制御手段は、前記選択手段によって選択したn個の子端末機に対して、前記親ＩＤ情報を基に前記ホストコンピュータが前記親ＩＤ情報を特定できる子端末ＩＤをn個生成し、生成した子端末ＩＤを各子端末機毎に送信するように前記第1の通信手段を制御し、各子端末機の前記制御手段は、前記親端末機からの前記子端末ＩＤを前記第1の通信手段で受信すると、受信した当該子端末ＩＤに前記子ＩＤ情報を付加して前記第2の通信手段により前記ホストコンピュータに送信するように前記第2の通信手段を制御することを特徴とする電話回線の制御委譲システム。

【請求項2】前記親ＩＤ情報は、前記親端末機のユーザーの電話番号についての電話番号であることを特徴とす

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る請求項1記載の電話回線の制御委譲システム。

【請求項3】 前記親端末機は、前記ホストコンピュータと通信を行う第2の通信手段を備えたことを特徴とする請求項1又は2記載の電話回線の制御委譲システム。

【請求項4】 前記親端末機の前記第2の通信手段は、前記ホストコンピュータから予め割り当てられた通信速度の範囲内で前記ホストコンピュータと通信を行うことを特徴とする請求項3記載の電話回線の制御委譲システム。

【請求項5】 前記親端末機は、前記ホストコンピュータから予め割り当てられた通信速度の範囲内で、前記n個の子端末機の前記第2の通信手段でそれ同時に前記ホストコンピュータと通信を行う内容の制御を委譲することを特徴とする請求項4記載の電話回線の制御委譲システム。

【請求項6】 前記親端末機は、制御の委譲の際に、前記n個の子端末機の少なくとも1個について、前記第2の通信手段で使用する通信速度を指定することを特徴とする請求項5記載の電話回線の制御委譲システム。

【請求項7】 前記親端末機は、前記ホストコンピュータから予め割り当てられた通信速度の範囲内で、前記親端末機の前記第2の通信手段及び前記n個の子端末機の前記第2の通信手段でそれぞれ同時に前記ホストコンピュータと通信を行う内容の制御を委譲することを特徴とする請求項4記載の電話回線の制御委譲システム。

【請求項8】 前記親端末機は、制御の委譲の際に、前記親端末機及び/又は前記n個の子端末機の少なくとも1の端末機について、前記第2の通信手段で使用する通信速度を指定することを特徴とする請求項7記載の電話回線の制御委譲システム。

【請求項9】 前記ホストコンピュータは、前記親端末機及び前記n個の子端末機の各々の第2の通信手段で行う通信速度の合計を監視し、前記親端末機に予め割り当てた通信速度の範囲内になるように調整する通信速度監視部を有することを特徴とする請求項5乃至8のいずれか1記載の電話回線の制御委譲システム。

【請求項10】 前記ホストコンピュータの前記通信速度監視部は、前記親端末機及び前記n個の子端末機の各々の第2の通信手段で行う通信速度の合計が前記親端末機に予め割り当てた通信速度の範囲を超えた場合には、前記親端末機及び前記n個の子端末機の各々の第2の通信手段で使用している通信速度の割合に応じて低減するように調整することを特徴とする請求項9記載の電話回線の制御委譲システム。

【請求項11】 前記ホストコンピュータの前記通信速度監視部は、前記親端末機及び前記n個の子端末機の各々の第2の通信手段で行う通信速度の合計が前記親端末機に予め割り当てた通信速度の範囲を超えた場合には、前記親端末機から前記n個の子端末機への制御の委譲の際に通信速度が指定されていない前記親端末機及び/又

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は前記子端末機についての通信速度を低減するように調整することを特徴とする請求項6又は8記載の電話回線の制御委譲システム。

【請求項12】 前記ホストコンピュータは、前記各子端末機の前記第2の通信手段から送信された前記子端末ID及び前記子ID情報に基づいて、前記通信事業者が提供する通信サービスが前記各子端末機の前記第2の通信手段で受信されるように制御することを特徴とする請求項1乃至11のいずれか1記載の電話回線の制御委譲システム。

【請求項13】 前記ホストコンピュータは、前記通信事業者が提供する通信サービスについての課金を、前記親ID情報を有するユーザ宛に課する課金処理を行う課金処理部を有することを特徴とする請求項12記載の電話回線の制御委譲システム。

【請求項14】 前記ホストコンピュータは、前記通信事業者が提供する通信サービスとして、インターネットへの接続サービスについての制御を行うことを特徴とする請求項1乃至13のいずれか1記載の電話回線の制御委譲システム。

【請求項15】 前記ホストコンピュータは、前記通信事業者が提供する通信サービスとして、他の電話機への接続サービスについての制御を行うことを特徴とする請求項1乃至14のいずれか1記載の電話回線の制御委譲システム。

【請求項16】 前記親端末機は、前記選択手段で選択したn個の子端末機に対して前記子端末IDとともに認証情報と委譲する制御内容について示す制御内容情報を各子端末機毎に送信するように、前記制御手段が前記30第1の通信手段を制御することを特徴とする請求項1乃至15のいずれか1記載の電話回線の制御委譲システム。

【請求項17】 前記親端末機の前記選択手段には、前記第1の通信手段により通信を行った子端末機の一覧を表示する表示手段と、前記表示手段に表示された子端末機の一覧のうち制御を委譲しようとする前記n個の子端末機について設定する設定入力手段とが含まれることを特徴とする請求項1乃至16のいずれか1記載の電話回線の制御委譲システム。

【請求項18】 前記子端末機は、前記親端末機の有する機能についての一部又は全部の委譲を受けて、前記第2の通信手段で前記ホストコンピュータとの通信を行うことを特徴とする請求項1乃至17のいずれか1記載の電話回線の制御委譲システム。

【請求項19】 前記子端末機は、制御委譲を中止する旨の制御委譲中止信号を前記第1の通信手段で受信するまで、前記第2の通信手段で前記ホストコンピュータとの通信を行うことを特徴とする請求項1乃至18のいずれか1記載の電話回線の制御委譲システム。

50 【発明の詳細な説明】

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【0001】

【発明の属する技術分野】本発明は、電話回線の制御委託システムに関し、詳しくは、携帯電話機等の携帯端末機から1又は複数の子端末機に対して電話回線の使用権を委託して、電話回線の有効利用を図るためのシステムに関するものである。

【0002】

【従来の技術】近年、携帯電話機、PHS (Personal Handyphone System) 又はPDA (Personal Digital Assistant) 等の移動体通信端末装置の急速な普及に伴い、個人の日常生活においては、通常の有線による一家庭用の電話回線と、無線による個人用の移動体通信端末装置の回線との2回線を使い分けて活用されることが一般的になりつつある。

【0003】また、近年のインターネット等の情報通信網の普及により、情報通信網の利用者は、上述の移動体通信端末装置を利用して、メールの送受信、各種情報の取得、商品の購入、ホテルやチケットの予約などの、様々なサービスの提供を受けることができるようになつた。

【0004】

【発明が解決しようとする課題】さらには、最近では、次世代の携帯電話機の形態として、各種放送の受信機能、テレビ電話機能、GPS (Global Positioning System: 全地球測位システム) による複数の人工衛星を利用したナビゲーション機能などの、様々な機能を備えた複合端末装置としての役割を持たせることが提案されている。また、次世代の携帯電話機の形態としては、1回線を複数の回線に分割して、この分割した回線を各携帯電話機が同時に使用することにより、当該複数の携帯電話機が同時に通信を行う所謂マルチレート機能やマルチコール機能が付与されることが予想される。

【0005】このような現状より、利用者が情報通信網のサービスを受けるために使用される装置は、上記移動体通信端末及びパソコン等の家庭用電子機器から、さらにはテレビ等の家庭用電子機器へと広まるものと予想され、近い将来には、全ての電化製品に情報通信網へのアクセス機能が付与され、データ通信やサービス提供者による課金処理等のために、電話回線等を介して情報通信網へアクセスできるようになることが予想される。

【0006】このような、電話回線の複数保有、電化製品に対する電話機能付与等の傾向下においては、利用者の認証に関する重要性が益々高くなる。例えば、不特定多数の利用者が、職場の会議室等に配置されている共有のテレビを利用し、当該テレビで情報通信網へアクセスして所定のサービスを受けるような場合を考えてみると、サービス提供等に関する課金の対象者について、本来は当該不特定多数の利用者とすべき場合であっても、

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現実にはその対象者の認証が困難である。

【0007】これに対して、例えば当該不特定多数の利用者が所有する各端末装置を利用して、当該複数の端末装置で各端末装置毎のIDを用いて情報通信網へ略同時にアクセスして、それぞれ同一のサービスを受けるようなシステムとすることも考えられ、このようなシステムとすれば、各利用者を課金対象者として特定することができる。しかしながら、今度は、課金対象者を例えば当該会社名義とした場合等に、逆に不便が生じることになる。

【0008】一方、移動体通信端末装置は、容易な移動を可能にするための小型化、軽量化、等の構成が求められており、これに起因して、小型の入力キーの操作がしにくく操作間違えが起きやすいこと、メモリ容量及び表示部における表示領域の制限があること、さらには連続使用時間に限界があること、等の問題があった。

【0009】このような問題に対して、自宅又は職場等の屋内において情報通信網へアクセスして種々のサービスを受けるにあたっては、該サービス提供を受けるに適切な電子機器を利用できることが好ましいが、この場合には、移動体通信端末装置以外の各種電子機器に加入者回線及び利用者のID等を設定することになると、ID等の管理が煩雑になったり、さらには加入者回線の使用権の基本料金がかさむ等の新たな問題が生じる。

【0010】例えば、利用者が、携帯電話機等の移動体通信端末装置を利用して、情報通信網へアクセスして株価に関するデータを入手しようとする場合には、表示領域の制限のために、株価の推移についての折れ線グラフ等の、利用者にとって最も必要な詳細部分が識別又は表示されないという問題が生じる。このような場合には、移動体通信端末装置の代わりに、大画面を有する自宅のテレビ等の表示部に対して該詳細部分を表示することが適当であるが、これを実現しようとすると、テレビ等にも加入者回線及び利用者のIDの設定等が必要になる。しかしながら、このような場合には、例えば家族の他の人が当該テレビを利用して情報通信網へアクセスして、例えばチケットの予約等のサービスを受けようとする場合には、その都度利用者のIDの設定等を変更しなければならず、管理が不便である。

【0011】さらには、将来的に、全ての電化製品に上述の電話機能が付与された場合に、各製品毎にそれぞれ電話番号を割り当てることとすると、これら各製品毎に電話の基本料金が課されることとなり、各電話番号の管理や費用面での負担が過大となる。

【0012】このように、現状のシステムでは、近い将来における移動体通信端末装置のさらなる発達が確実視されている状況にも拘わらず、電話回線の有効利用とユーザの意図に応じた課金処理を行うことが困難である、という問題を有している。

【0013】本発明の目的は、情報通信網の利用時に、

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電話回線の有効利用を図りながらユーザの意図に応じた課金処理を行いつつ、利用者へのサービス向上に寄与するシステムを提供することにある。

【0014】

【課題を解決するための手段】本発明に係る電話回線の制御委譲システムは、通信事業者が提供する通信サービスについての制御を行うホストコンピュータと、ホストコンピュータが識別可能な親ID情報を有する親端末機と、ホストコンピュータが識別可能な子ID情報を有し、親端末機からの制御の委譲を受けてホストコンピュータとの通信を行う複数の子端末機を有し、親端末機は、各子端末機と通信を行う第1の通信手段と、第1の通信手段により通信を行った子端末機の中から、制御を委譲しようとするn個（nは1以上の整数）の子端末機を選択する選択手段と、第1の通信手段を制御する制御手段とを有し、子端末機は、親端末機と通信を行う第1の通信手段と、ホストコンピュータと通信を行う第2の通信手段と、第1の通信手段と第2の通信手段とを制御する制御手段とを有し、親端末機の制御手段は、選択手段によって選択したn個の子端末機に対して、親ID情報を基にホストコンピュータが親ID情報を特定できる子端末IDをn個生成し、生成した子端末IDを各子端末機毎に送信するように第1の通信手段を制御し、各子端末機の制御手段は、親端末機からの子端末IDを第1の通信手段で受信すると、受信した当該子端末IDに子ID情報を付加して第2の通信手段によりホストコンピュータに送信するように第2の通信手段を制御することを特徴とする。

【0015】ここで、親ID情報としては、ホストコンピュータが親端末機を識別可能な情報であれば特に限定されないが、好ましくは親端末機のユーザの電話番号についての電話番号情報をとする。

【0016】また、親端末機について、ホストコンピュータと通信を行う第2の通信手段を備えた構成とすることにより、親端末機と子端末機とで同時にホストコンピュータと通信を行うことが可能となる。ここで、親端末機の第2の通信手段は、ホストコンピュータから予め割り当てられた通信速度の範囲内でホストコンピュータと通信を行うようになる。この場合に、親端末機は、ホストコンピュータから予め割り当てられた通信速度の範囲内で、n個の子端末機の第2の通信手段でそれぞれ同時にホストコンピュータと通信を行う内容の制御を委譲するようになる。さらに、この場合には、親端末機は、制御の委譲の際に、n個の子端末機の少なくとも1個について、第2の通信手段で使用する通信速度を指定することとしても良い。

【0017】親端末機について第2の通信手段を設ける場合には、親端末機は、ホストコンピュータから予め割り当てられた通信速度の範囲内で、親端末機の第2の通信手段及びn個の子端末機の第2の通信手段でそれぞれ

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同時にホストコンピュータと通信を行う内容の制御を委譲するようになる。この場合には、親端末機は、制御の委譲の際に、親端末機及び/又はn個の子端末機の少なくとも1の端末機について、第2の通信手段で使用する通信速度を指定することとしても良い。

【0018】親端末機は、選択手段で選択したn個の子端末機に対して子端末IDとともに認証情報と委譲する制御内容について示す制御内容情報を各子端末機毎に送信するように、制御手段が第1の通信手段を制御する構成とする。

【0019】また、親端末機の選択手段については、第1の通信手段により通信を行った子端末機の一覧を表示する表示手段と、表示手段に表示された子端末機の一覧のうち制御を委譲しようとするn個の子端末機について設定する設定入力手段とを含める構成とする。

【0020】一方、ホストコンピュータについては、親端末機及びn個の子端末機の各々の第2の通信手段で行う通信速度の合計を監視し、親端末機に予め割り当てた通信速度の範囲内になるように調整する通信速度監視部を有する構成とする。

【0021】ここで、ホストコンピュータの通信速度監視部は、親端末機及びn個の子端末機の各々の第2の通信手段で行う通信速度の合計が親端末機に予め割り当てた通信速度の範囲を超えた場合には、親端末機及びn個の子端末機の各々の第2の通信手段で使用している通信速度の割合に応じて低減するように調整する。

【0022】または、ホストコンピュータの通信速度監視部は、親端末機及びn個の子端末機の各々の第2の通信手段で行う通信速度の合計が親端末機に予め割り当てた通信速度の範囲を超えた場合には、親端末機からn個の子端末機への制御の委譲の際に通信速度が指定されていない親端末機及び/又は子端末機についての通信速度を低減するように調整する。

【0023】ホストコンピュータは、各子端末機の第2の通信手段から送信された子端末ID及び前記子ID情報を基づいて、通信事業者が提供する通信サービスが各子端末機の前記第2の通信手段で受信されるように制御する。この場合に、ホストコンピュータは、通信事業者が提供する通信サービスについての課金を、親ID情報を有するユーザ宛に課する課金処理を行う課金処理部を有する構成とする。

【0024】ホストコンピュータは、通信事業者が提供する通信サービスとして、例えばインターネットへの接続サービスについての制御を行うようになる。

【0025】また、ホストコンピュータは、通信事業者が提供する通信サービスとして、他の電話機への接続サービスについての制御を行うようになる。

【0026】一方、子端末機の構成としては、親端末機の有する機能についての一部又は全部の委譲を受けて、第2の通信手段でホストコンピュータとの通信を行いうも

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のとする。

【0027】また、子端末機は、制御委譲を中止する旨の制御委譲中止信号を第1の通信手段で受信するまで、第2の通信手段でホストコンピュータとの通信を行うものとする。

【0028】

【発明の実施の形態】本発明の実施の形態を、図面を参照しながら詳細に説明する。

【0029】図1に、本発明を適用した電話回線の制御委譲システムの概念図を示す。

【0030】この実施の形態では、図1に示すように、親端末機として、移動体通信端末装置である携帯電話機1が用いられ、子端末機として、持ち運び可能な所謂ノート型のパーソナルコンピュータ（以下、単にパソコンという）2が複数台用いられ、携帯電話機1とパソコン2（2A, 2B, ..., 2n）のいずれもが、通信事業者が提供する通信サービスを制御するホストコンピュータ3に対して接続できるようになっている。そして、第1の実施の形態では、1台の携帯電話機1と各パソコン2とで通信を行うようになっている。

【0031】（親端末機の概略構成）親端末機としての携帯電話機1は、携帯電話機としての機能を備えた携帯電話機本体10と、各パソコン2に対して通信を行うための第1の通信手段としての応答器4とを有している。

【0032】親端末機としてのこの携帯電話機1は、予め定められた通信速度（例えば2Mbps）が割り当てられており、固有の電話回線が設定されている。

【0033】携帯電話機1の携帯電話機本体10は、この実施の形態では、図1に示すように、装置本体（筐体）の上部にアンテナ14が配置され、装置前面には、上から、通話手段としてのスピーカ17と、液晶パネル等からなる表示手段としての表示部15と、操作入力手段としての多数のキースイッチからなる操作入力部12と、通話手段としてのマイク16とがそれぞれ配置されている。なお、携帯電話機1の他の構成部分については図2に示し、これらについての説明は後述する。また、この実施の形態では、図1に示すように、携帯電話機本体10の上部に応答器4が一体に設けられた構成となっているが、この配置に限定されることは勿論であり、さらには、携帯電話機本体10に対して応答器4を着脱可能とする構成であっても良い。

【0034】（子端末機の概略構成）一方、子端末機としてのパソコン2は、通常のコンピュータとしての機能を備えたパソコン本体20と、携帯電話機1に対して通信を行うための第1の通信手段としての質問器5とを有している。

【0035】パソコン2は、この実施の形態では、図1に示すように、多数のキースイッチによる操作入力部22を有するパソコン本体20の筐体設置側に対して、液晶表示ディスプレイからなる表示部24を有する筐体上

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部側が回動可能となっており、この筐体上部側に質問器5が取り付けられた構成となっている。ここで、パソコン2は、パソコン本体20の表示部24が携帯電話機1の表示部15よりも表示領域（面積）が広く、操作入力部22の各キーが携帯電話機1の操作入力部12の各キースイッチよりも大きくなっている。

【0036】この実施の形態では、パソコン本体20の上部に質問器5が一体に設けられた構成となっているが、この配置に限定されることは勿論であり、さらには、パソコン本体20に対して質問器5を着脱可能とする構成であっても良い。

【0037】（ホストコンピュータの概略構成）ホストコンピュータ3は、通信事業者が提供する通信サービスとして、例えばインターネットや各種の情報通信網と接続されている。そして、ホストコンピュータ3は、上述した親端末機又は子端末機からの各種要求に応じて、当該要求に応じた各種サービスを提供するようになっている。ここで、ホストコンピュータ3が行う各種サービスとしては、例えば被呼側となる他の有線或いは無線による電話機との接続サービス、上述のインターネットや各種情報通信網からの各種データを送信するデータ送信サービスなどが含まれる。

【0038】また、ホストコンピュータ3は、親端末機又は子端末機からの認証情報に基づいて、正規なユーザか否かを認証する不図示の認証部を有しており、認証部で正規なユーザと認めた場合にのみ、親端末機又は子端末機からの要求に応じたサービスを提供するようになっている。そして、ホストコンピュータ3は、不図示の課金処理部を有し、前記認証部で認証した正規なユーザに対して所定の課金処理を行うようになっている。

【0039】さらに、ホストコンピュータ3は、親端末機である携帯電話機1に予め所定の通信速度（例えば2Mbps）を割り当てるとともに、この通信速度の範囲内で、携帯電話機1からの要求に応じた通信速度を、携帯電話機1が選択した複数の子端末機に対して割り当てる不図示の通信速度割当部を有している。さらにまた、ホストコンピュータ3は、携帯電話機1及び携帯電話機1が選択した複数の子端末機のホストコンピュータ3に対する通信速度を監視し、親及び各子端末機の通信速度の合計が親端末機の有する通信速度（例えば2Mbps）を超えないように調整するための通信速度監視部を有している。

【0040】（親端末機の回路構成）次に、図2を参照して、携帯電話機1及びパソコン2の回路構成について説明する。図2に示すように、携帯電話機1の携帯電話機本体10は、この携帯電話機1全体を制御するCPU11と、図1で説明した操作入力部12と、ホストコンピュータ3と通信を行う第2の通信手段としての送受信部13及びアンテナ14と、図1で説明した表示部15、マイク16、及びスピーカ17と、携帯電話機1全

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体を振動させるバイブレータ18と、後述する各種の情報が格納されるメモリ19とを有している。

【0041】携帯電話機本体10のCPU11は、携帯電話機1全体の制御についての制御プログラム及び操作入力部12による入力操作に基づいて、送受信部13、表示部15、スピーカ17、バイブレータ18、及びメモリ19を制御する。また、携帯電話機本体10のCPU11は、後述する応答器4の通信部41と接続され、通信部41から入力した信号に基づいて各部を制御する。

【0042】例えば、携帯電話機本体10では、操作入力部12による入力操作に基づいて、接続すべき被呼側の電話機の電話番号が入力されると、CPU11の制御により、当該電話番号が表示部15に表示され、送受信部13及び送受信部13に接続されたアンテナ14を介して、被呼側との回線接続のための無線信号が送信される。ホストコンピュータ3は、携帯電話機1から送信されたこの無線信号を受信して、被呼側の電話機との接続を図る処理を行う。

【0043】そして、被呼側の電話機と回線が接続されると、携帯電話機本体10では、CPU11の制御により、被呼側の電話機からの声音がスピーカ17から声音として出力され、これに対する発呼側のユーザーの発する声音がマイク16を通して電気信号に変換され、送受信部13で所定処理が施され、アンテナ14及びホストコンピュータ3を介して被呼側の電話機に通話のための無線信号として送信される。

【0044】一方、携帯電話機本体10では、発呼側となる相手側の電話機からホストコンピュータ3を介して送信された回線接続のための無線信号をアンテナ14を介して送受信部13で受信すると、CPU11の制御により、若信音がスピーカ17から出力され、又は操作入力部12の入力操作に基づく設定状態に応じてバイブルレータ18が振動し、被呼側のユーザーにより操作入力部12の所定のキーが操作されると、発呼側と回線が接続され、上述と同様に、相手側の電話機との通話が可能な状態となる。

【0045】さらに、携帯電話機本体10では、操作入力部12による入力操作に基づいて、接続すべきインターネットへの電話番号が入力されると、CPU11の制御により、当該電話番号が表示部15に表示され、送受信部13及び送受信部13に接続されたアンテナ14を介してインターネットへの回線接続のための無線信号が送信される。ここで、ホストコンピュータ3は、携帯電話機1から送信されたこの無線信号を受信して、インターネットとの接続を図る処理を行う。

【0046】そして、インターネットと回線が接続されると、携帯電話機本体10では、CPU11の制御により、インターネット側から送られる画像データやメールについての文字データ等が表示部15に表示され、音声

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データについてはスピーカ17から出力され、このうちユーザーが必要とするデータについては、操作入力部12による入力操作に基づいて、メモリ19に格納される。

【0047】携帯電話機本体10の操作入力部12は、この他にも、応答器4を介してパソコン2の質問器5との通信を行う場合の各種設定を行う際にも操作される。

【0048】携帯電話機本体10のメモリ19は、応答器4を介してパソコン2の質問器5との通信を行った後に質問器5側から送られてくる詳細を後述する通信結果についての情報を記憶する。

【0049】また、メモリ19は、携帯電話機1についての電話番号のデータ（以下、電話番号情報という。）と、子端末機（パソコン2）側に委譲する制御内容についてのデータ（以下、制御内容情報という。）とが格納されており、これらの各情報をCPU11の制御により読み出されてパソコン2の質問器5側に送信されるようになっている。

【0050】すなわち、携帯電話機1の応答器4は、パソコン2の質問器5とデータの送受信を行う通信部41を有しており、携帯電話機本体10のCPU11がメモリ19内の電話番号情報と制御内容情報を読み出して、これら各情報を制御信号とともに通信部41に供給することにより、通信部41からこれら各情報を無線信号の形態で出力される。なお、無線信号の形態としては、電波や赤外線等が使用可能である。

【0051】さらに、携帯電話機1の応答器4では、電話番号情報及び制御内容情報を送信するに先立って、携帯電話機本体10のCPU11の制御に基づいて、パソコン2の質問器5との接続を確立するための接続信号が通信部41から出力されるようになっており、この処理については後述する。

【0052】（子端末機の回路構成）次に、子端末機側のパソコン2の回路構成について説明する。図2に示すように、パソコン2のパソコン本体20は、このパソコン本体20全体を制御するCPU21と、図1で説明した操作入力部22と、ホストコンピュータ3と有線あるいは無線で接続されることによりデータの送受信を行うためのモ뎀等を備えた送受信部23と、図1で説明した表示部24と、各種データが格納されるハードディスクドライブ（HDD）25と、プリンタ、外部記憶装置、カードモ뎀、他のパソコン、などの外部機器との接続を図るためのインターフェース部（I/F部）26と、声音を出力するスピーカ27とを備えている。

【0053】パソコン本体20のCPU21は、所定の制御プログラム及び操作入力部22による入力操作に基づいて、送受信部23、表示部24、HDD25、I/F部26、及びスピーカ27を制御する。また、パソコン本体20のCPU21は、後述する質問器5の通信部51と接続され、通信部51から入力された信号に基づいて各部を制御する。

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【0054】例えば、パソコン本体20では、ホストコンピュータ3に連なる電話回線28と送受信部23とを有線で接続した状態で、接続すべきインターネットへの電話番号が操作入力部22による入力操作で入力されると、CPU21の制御により、当該電話番号が表示部24に表示され、送受信部23及び前記電話回線28を介して、インターネットへの回線接続のための信号がホストコンピュータ3に送信される。ホストコンピュータ3は、パソコン本体2から送信されたこの信号を受信すると、インターネットとの接続を図る処理を行う。

【0055】そして、パソコン本体20では、インターネットと回線が接続されると、ホストコンピュータ3を介してインターネットから送られる画像データやメールについての文字データ等が、CPU21の制御によって表示部24に表示され、音声データについてはスピーカ27から音として出力され、このうちユーザーが必要とするデータについては、操作入力部22による入力操作に基づいて、HDD25に格納（ダウンロード）される。

【0056】パソコン本体20の操作入力部22は、この他にも、後述する質問器5を介して携帯電話機1の応答器4との通信を行う場合の各種設定を行う際にも操作される。

【0057】パソコン2の質問器5は、パソコン本体20のCPU21と接続され、携帯電話機1の応答器4とデータの送受信を行う通信部51を有している。

【0058】パソコン2の質問器5では、パソコン本体20のCPU21から出力される制御信号に基づいて、携帯電話機1の応答器4との接続を確立するための確認信号が通信部51から出力されるようになっており、この処理については後述する。

【0059】（親端末機から子端末機への制御の委譲）このような構成とされた携帯電話機1及びパソコン2においては、親端末機である携帯電話機1が子端末機である複数のパソコン2A、2B、…2nに以下のように制御を委譲することによって、本来携帯電話機1が行う処理を各パソコン2がいわば代行したり、携帯電話機1と各パソコン2とが同時にホストコンピュータ3と通信を行うようになっている。

【0060】以下、この制御委譲の処理について、図3のフローチャートを参照して説明する。なお、図3は、携帯電話機1の応答器4と複数のパソコン2A、2B、…2nの各質問器5とホストコンピュータ3との間で行われる処理を説明するためのフローチャートである。

【0061】本実施の形態では、まず、携帯電話機1の応答器4をパソコン2A～2nの各質問器5に対して所定距離内に近づけ、操作入力部12の所定のキースイッチが押される。このとき、携帯電話機1における応答器4の通信部41から接続信号が送信され、子端末機とし

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ての各パソコン2A～2nは、親端末機である携帯電話機1からの接続信号を受信する（ステップS1）。

【0062】次のステップS2で、パソコン2A～2nは、携帯電話機1に確認信号を送信する。この確認信号は、各パソコン2A～2n毎にそれぞれ異なる信号とし、例えば当該パソコン2固有の子ID情報を含めるようとする。ここで、当該パソコン2固有の子ID情報とは、ホストコンピュータ3が識別可能な情報であり、例えば、パソコン2の製品番号についての情報、パソコン2の所有者についての情報、パソコン2の所有者の銀行口座等についての情報などである。また、当該パソコン2が独自の電話番号を有している場合には、その電話番号についての情報を含めて良い。

【0063】この確認信号を各パソコン2A～2nから受信した携帯電話機1は、次のステップS3で、各子端末機（パソコン2A～2n）についての一覧を表示部15に表示し、制御を委譲する対象となる子端末機を選択するように、ユーザーに操作入力部12の操作を行うよう促し、ステップS4に移行して操作入力部12の入力を待つ。なお、この例では、操作入力部12で各パソコン2A～2nの全てを選択した場合について説明する。

【0064】ステップS4で操作入力部12の入力が行われて子端末機の選択が行われると、ステップS5に移行して、選択された子端末機の数の分だけ、子端末IDを発行する。この子端末IDは、ホストコンピュータ3が、親端末機である携帯電話機1が発行したものであることを認識でき、かつ、複数の子端末機のそれぞれを識別できるようなIDとする。この実施の形態では、子端末IDとして、親端末機である携帯電話機1の電話番号に所定の符号を付加して、各子端末機毎に異なる電話番号となるような電話番号情報を発行することとしている。

【0065】具体的には、例えば携帯電話機1の電話番号が「090-1234-5678」の場合には、1台目の子端末機に対しては「090-1234-5678-01」、2台目の子端末機に対しては「090-1234-5678-02」…のように枝番号を付加して割り当てる。

【0066】なお、子端末IDの実施の形態としては、ホストコンピュータ3が、親端末機である携帯電話機1が発行したものであることを認識でき、かつ、複数の子端末機のそれぞれを識別できるようなIDであればこれに限られない。

【0067】次のステップS6では、生成した子端末IDとしての電話番号情報を各子端末機に対して個別に送信する。この実施の形態では、ステップS6で、電話番号情報をともに、親端末機である携帯電話機1の認証情報と、子端末機に委譲する制御内容についての制御内容情報を、各子端末機に対して個別に送信する。ここで、携帯電話機1の認証情報とは、例えば携帯電話機1

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のユーザが設定したパスワード情報とし、携帯電話機1のユーザが操作入力部12の操作で直宜変更可能な情報とする。

【0068】なお、この例では、各パソコン2A～2nに委譲する制御内容として、情報通信網であるインターネットへアクセスして所定の有料データをダウンロードする制御とし、この制御内容を委譲する旨を示す制御内容情報を携帯電話機1の通信部41からパソコン2A～2nの各通信部51に送信するものとする。ここで、制御内容情報は、メモリ19に格納されており、送信に先立って例えば携帯電話機1の表示部15にその一覧を表示し、ユーザが操作入力部12を操作して、表示された一覧から選択することにより、CPU11が該当する情報をメモリ19から読み出して、応答器4の通信部41から無線信号として送信するようになる。

【0069】この例では、子端末機である各パソコン2A～2nに同一の制御内容を委譲するため、各パソコン2A～2nに対して同一の制御内容情報が送信されるが、各子端末機毎に異なる制御内容を委譲しても良く、その場合には、パソコン2A～2nに対して相互に異なる制御内容情報が送信されることになる。例えば、パソコン2A～2nに対して相互に異なる通信速度を設定したい場合には、操作入力部12の操作により、各パソコン2A～2nに対してそれぞれ異なる制御内容情報を送信される。また、例えばパソコン2Aの使用する通信速度のみを設定したい場合には、操作入力部12の操作により、パソコン2Aに対してのみ異なる制御内容情報を送信される。

【0070】各パソコン2A～2nは、携帯電話機1からの電話番号情報と認証情報と制御内容情報を含んだ信号をステップS7で受信すると、次のステップS8で、これら各情報に前記子ID情報を附加してホストコンピュータ3に送信する。ホストコンピュータ3は、ステップS9で各パソコン2A～2nからの各情報を受信すると、次のステップS10で、前記認証部が例えば電話番号情報と認証情報を照合することにより認証を行い、続くステップS11で、各子端末機（パソコン2A～2n）とインターネットとを接続する処理を行う。

【0071】ここで、各パソコン2A～2nから受信した制御内容情報に通信速度を指定する旨の情報を含まれている場合には、ホストコンピュータ3は、前記通信速度割当部によって、各パソコン2A～2nが当該指定された速度で通信を行うように、各パソコン2A～2nに通信速度を割り当てる。

【0072】そして、これ以後は、ホストコンピュータ3は、前記通信速度監視部で各パソコン2A～2nとインターネットとの接続状態を監視して、各パソコン2A～2nで通信している通信速度の合計が親端末機の有する通信速度（例えば2Mbp/s）を超えないように監視し、超えた場合に調整を行う。

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【0073】ここで、各パソコン2A～2nで通信している通信速度の合計が親端末機としての携帯電話機1の有する通信速度（例えば2Mbp/s）を超えた場合の調整方法としては、ホストコンピュータ3は、例えばn個の各パソコン2A～2nの各々の送受信部23で使用している通信速度の割合に応じて低減するように、前記通信速度監視部で調整する。また、他の調整方法としては、ホストコンピュータ3は、携帯電話機1からn個の各パソコン2A～2nへの制御の委譲の際（制御内容情報の送信の際）に通信速度が指定されていないパソコン2についての通信速度を低減するよう調整する。

【0074】さらに、ホストコンピュータ3は、各パソコン2A～2nについてのインターネットへの接続に対する接続料金（電話料金）が、携帯電話機1の電話番号の使用権を有するユーザに課されるように、前記課金処理部で課金処理を行う。

【0075】そして、続くステップS12で、各パソコン2A～2nは、所定の有料データを各パソコン本体20のHDD25にダウンロードする制御を行う。これにより、有料データのダウンロードに対するサービス料金（課金）が、ホストコンピュータ3の課金処理部によって、携帯電話機1の電話番号の使用権を有するユーザに課されることになる。

【0076】ダウンロードの処理が終了すると、各パソコン2A～2nの質問器5は、ステップS13で通信結果についての各種情報を含んだ無線信号を、携帯電話機1の応答器4に対して送信し、一連の処理が終了し、携帯電話機1から各パソコン2A～2nへの制御委譲が終了する。ここで、通信結果についての情報としては、例えば、インターネットへの接続時間である通信時間、電話料金、有料データのダウンロードに対するサービス料金（課金）、ダウンロードデータ量等についての情報が含まれる。

【0077】なお、各パソコン2A～2nによるこれらの処理を途中で終了したい場合には、携帯電話機1のユーザが操作入力部12で所定の操作を行うようになる。この操作により、携帯電話機1のCPU11の制御に基づいて、応答器4の通信部41から制御委譲を中止する旨の制御委譲中止信号が送信され、各パソコン2A～2nの通信部51がこれを受信すると、CPU21の制御に基づいて、送受信部23から接続終了のコマンドがホストコンピュータ3に送信され、ホストコンピュータ3の処理によってインターネットへの接続が切断されることにより、携帯電話機1から各パソコン2A～2nへの制御委譲が終了する。

【0078】本実施の形態では、親端末機から複数の子端末機にこのような制御委譲を行うことにより、子端末機側の各パソコン2A～2nに対して固有の電話番号を設定する必要がなくなり、新たな電話番号の使用権についての基本料金を支払う負担から解消される。

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【0079】また、子端末機側の各パソコン2A～2nに固有の電話番号が設定されている場合であっても、ホストコンピュータ3及びインターネットへの接続については、当該電話番号の設定とは関係なしに親端末機側の携帯電話機1の電話番号に基づいて行われるので、接続に先立って各パソコン2A～2n側の電話番号の設定を変更する必要もない。すなわち、本実施の形態によれば、子端末機である各パソコン2A～2nの所有者が誰であろうとも、電話料金やサービス料金についての課金が親端末機側の携帯電話機1のユーザに対して課されることになり、例えば各パソコン2A～2nを不特定多数の人が集まる場所（例えばショールーム等）に設置した場合でも、特定のサービスの取得に要した通信料金、サービス提供料金等を、各パソコン2A～2nの所有者名義にかかわらず、各パソコン2A～2nの利用者等（この場合は携帯電話機1のユーザ）に対して適切に課金することが可能となる。

【0080】また、ダウンロードするデータが子端末機側のパソコン2A～2nの各HDD25に保存されるので、親端末機側の携帯電話機1では、メモリ19の記憶容量を大きくする必要がなく、不図示の電源電池の容量を増やす必要もないので、装置の小型、軽量化を維持することが可能となる。さらには、ダウンロードしたデータがHDD25から読み出されてパソコン本体20の表示部24で表示されるので、親端末機側の携帯電話機1では、携帯電話機本体10の表示部15の面積を大きくする必要が無く、装置の小型、軽量化を維持することが可能となる。

【0081】さらにまた、親端末機側の応答器4と子端末機側の質問器5とでやりとりされるデータの量が少ないのに、応答器4及び質問器5双方における通信部41、51を、簡易なインターフェースを用いて構成することが可能となる。

【0082】なお、上述した実施の形態では、子端末機側のパソコン2の送受信部23がホストコンピュータ3から有線信号を介してインターネットからのデータをダウンロードする例について説明したが、各子端末機が無線信号を介してデータをダウンロードする場合も同様の処理で行うことが可能である。

【0083】上述した実施の形態では、親端末機の構成を、応答器4と携帯電話機本体10とからなる携帯電話機1とした例について説明したが、親端末機側の構成はこれに限定されるものではなく、応答器4が取り付け或いは内蔵可能な各種端末機に適用可能である。応答器4が取り付け或いは内蔵可能な各種端末機としては、PHS（Personal Handyphone System）又はPDA（Personal Digital Assistant）等の各種移動体通信端末装置に適用できる。また、上述した実施の形態では、親端末機側がホストコンピュータ3と通信を行う必要がな

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いので、親端末機の構成としては、所謂リモートコントローラやICカードのような製品に対しても好適に適用可能である。

【0084】なお、上述した実施の形態では、親端末機の携帯電話機1が自らの持つ通信速度（2Mbps）の全てを子端末機であるパソコン2A～2nに委譲した場合の例であり、この場合には、子端末機であるパソコン2A～2nの通信中には、親端末機の携帯電話機1は自らの持つ通信速度が無くなるため、携帯電話機1の送受信部13及びアンテナ14によるホストコンピュータ3に対しての通信ができなくなる。

【0085】これに対して、携帯電話機1が自らの持つ通信速度（2Mbps）の一部（例えば1Mbps）のみをパソコン2A～2nに委譲することも可能であり、この場合には、親端末機の携帯電話機1と子端末機のパソコン2A～2nとで同時にホストコンピュータ3に対する通信を行うことが可能となり、携帯電話機1とパソコン2A～2nとの間でのホストコンピュータ3を介してのデータ通信等を行うことが可能となる。

【0086】なお、この場合には、ホストコンピュータ3の前記認証部による認証、前記通信速度割当部による通信速度の割り当て、前記通信速度監視部による通信速度の監視及び調整、前記課金処理部による課金処理については、携帯電話機1及びパソコン2A～2nに対して、上述と同様の処理で行うことが可能である。

【0087】上述した実施の形態では、子端末機の構成を、質問器5とパソコン本体20とからなるパソコン2とした例について説明したが、子端末機側の構成はこれに限定されるものではなく、質問器5が取り付け或いは内蔵可能な各種電化製品に適用可能である。

【0088】質問器5が取り付け或いは内蔵可能な各種電化製品の例としては、親端末機1と同様の構成を有する携帯電話機は勿論のこと、テレビ、ラジオ、カメラ、画像や音声の記録再生装置、冷暖房機（エアコン）、電子レンジ、ファクシミリ装置などの家庭用あるいはオフィス用の電子機器、さらには各種自動販売機のような不特定多数の者に利用される公共用の機器が挙げられ、これらの各種電化製品にホストコンピュータ3に対する通信機能を持たせることにより、独自の電話番号等を設定することなくホストコンピュータ3を介して様々なサービスを受けることができるようになる。

【0089】親端末機から子端末機へ委譲される制御の内容は、上述の例に限定されるものではなく、例えば子端末機が携帯電話機の場合には、着信専用の制御、発信専用の制御、着信双方の制御、等の委譲を行うことが可能である。

【0090】また、上述の実施の形態では、親端末機と子端末機との間のデータの送受信を無線信号を介して行うこととしたが、これに限定されず、有線信号を介して行っても良いことは勿論である。

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【0091】

【発明の効果】以上説明したように、本発明によれば、情報通信網の利用時に、電話回線の有効利用を図りながらユーザの意図に応じた課金処理を行いつつ、利用者へのサービス向上に寄与するシステムを提供することが可能となる。

【図面の簡単な説明】

【図1】本発明を適用した電話回線の制御委譲システムの実施の形態の概要を説明する図である。

【図2】図1の携帯電話機（親端末機）及びパソコン（子端末機）の回路構成を説明するためのブロック図である。

【図3】親端末機が各子端末機に制御を委譲する場合に行われる処理を説明するためのフローチャートである。

【符号の説明】

- 1 携帯電話機（親端末機）
- 2 パソコン（子端末機）
- 3 ホストコンピュータ
- 4 応答器
- 4 1 通信部（第1の通信手段）
- 1 0 携帯電話機本体
- 1 1 CPU（制御手段）
- 1 2 操作入力部（操作入力手段）
- 1 3 送受信部（第2の通信手段）
- 1 4 アンテナ
- 1 5 表示部（表示手段）
- 1 6 マイク
- 1 7 スピーカ

* 1 8 バイブレータ

1 9 メモリ

2 0 パソコン本体

2 1 CPU（制御手段）

2 2 操作入力部

2 3 送受信部（第2の通信手段）

2 4 表示部

2 5 HDD

5 質問器

1 0 5 1 通信部（第1の通信手段）

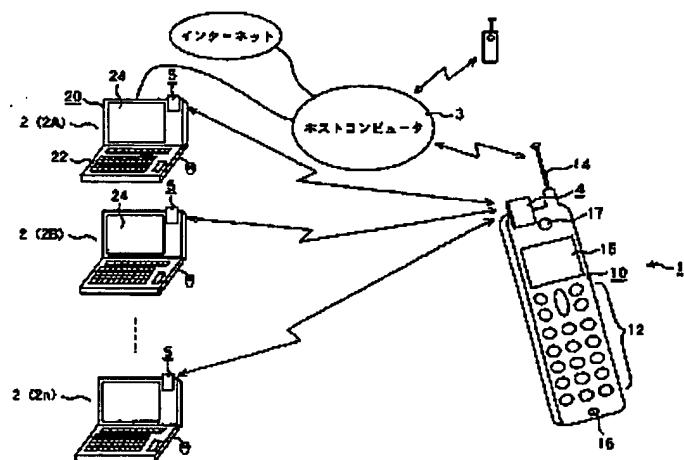
【要約】

【課題】電話回線の有効利用を図りながらユーザの意図に応じた課金処理を行いつつ、利用者へのサービス向上に寄与する。

【解決手段】通信事業者が提供する通信サービスについての制御を行うホストコンピュータ3と、ホストコンピュータが識別可能な親ID情報を有する親端末機1と、ホストコンピュータが識別可能な子ID情報を有し、親端末機からの制御の委譲を受けてホストコンピュータとの通信を行う複数の子端末機2A, 2B, ..., 2nを有し、親端末機1は、選択手段12によって選択したn個の子端末機に対して、親ID情報を基にホストコンピュータ3が親ID情報を特定できる子端末IDをn個生成し、生成した子端末IDを第1の通信手段4で各子端末機毎に送信し、各子端末機は、親端末機1からの子端末IDを第1の通信手段5で受信し、子ID情報を付加して第2の通信手段23でホストコンピュータに送信する。

*

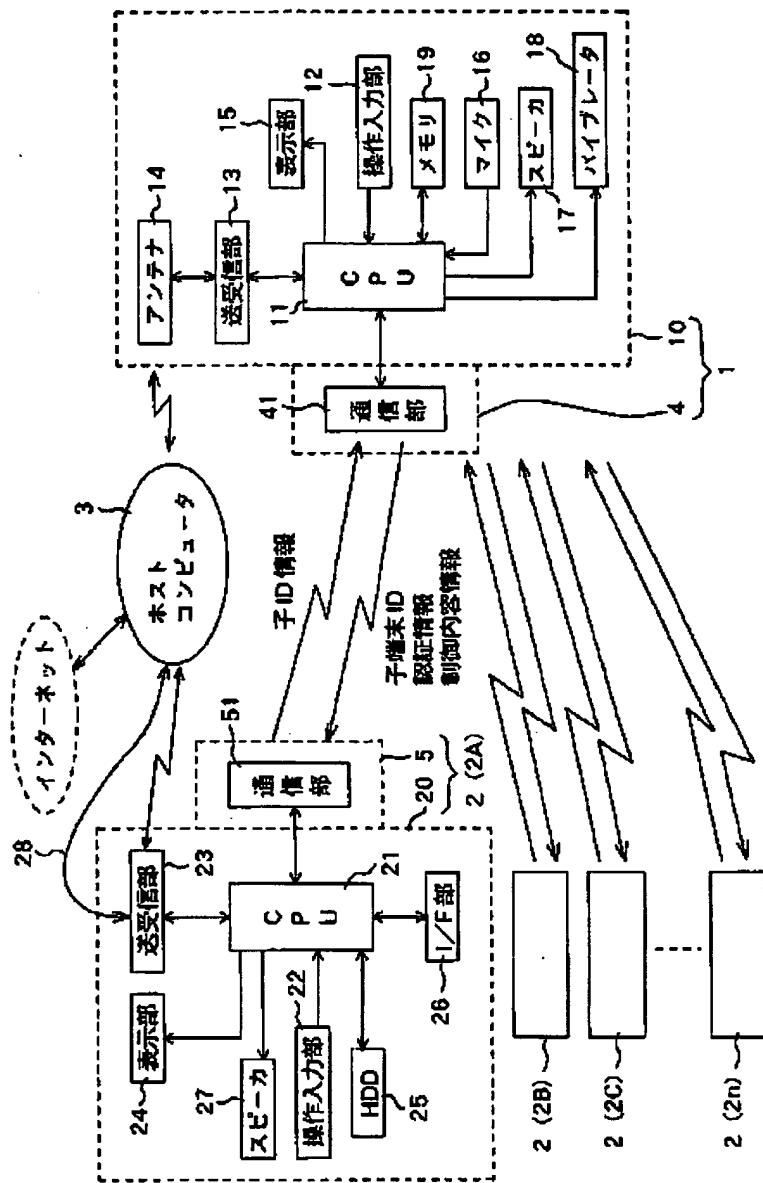
【図1】



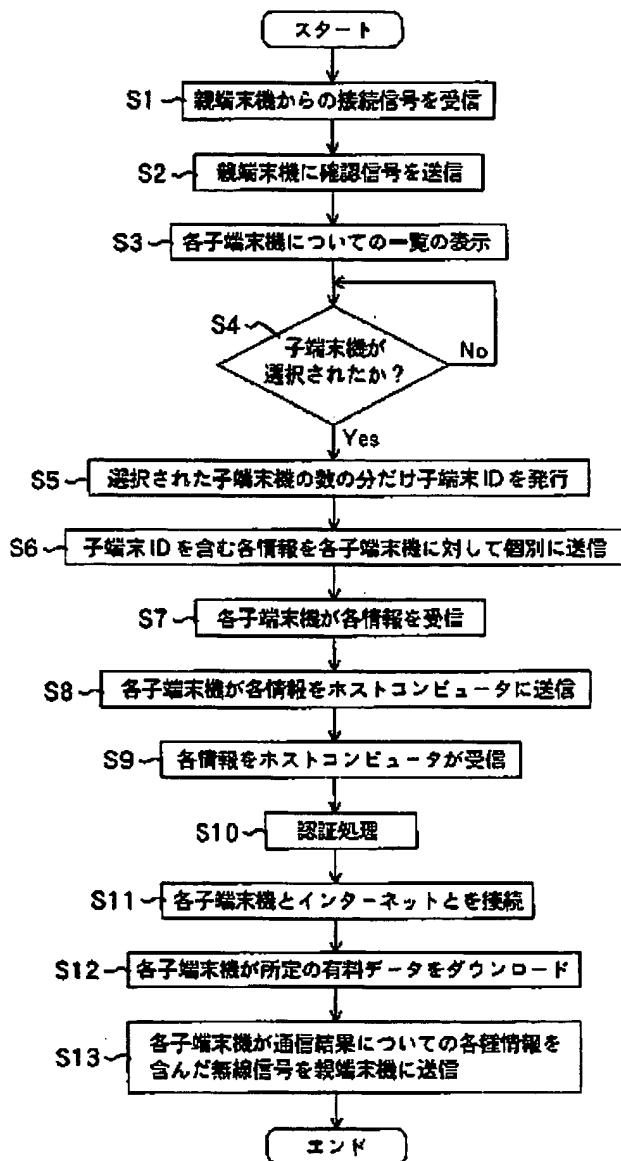
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[图2]



【図3】



フロントページの続き

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H04M 1/58 - 1/62
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H04B 7/00 - 7/26
H04Q 7/00 - 7/38

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CLAIMS

(57) [Claim]

[Claim 1] The host computer which performs the control about the communication service which a communication entrepreneur offers, The parent terminal with which the aforementioned host computer has an identifiable parent ID information, The aforementioned host computer has an identifiable child ID information, and it has two or more child terminals which perform the communication with the aforementioned host computer in response to a transfer of the control from the aforementioned parent terminal. the aforementioned parent terminal A selection means to choose n child terminals (for n to be one or more integers) which are going to transfer a control from the child terminals which communicated by the 1st means of communications which communicates with each child terminal, and the 1st aforementioned means of communications, It has a control means to control the 1st aforementioned means of communications. the aforementioned child terminal The 1st means of communications which communicates with the aforementioned parent terminal, and the 2nd means of communications which communicates with the aforementioned host computer, It has a control means to control the 1st aforementioned means of communications and the 2nd aforementioned means of communications. the aforementioned control means of the aforementioned parent terminal n child terminal IDs as which the aforementioned host computer can specify the aforementioned parent ID information on the basis of the aforementioned parent ID information are generated to n child terminals chosen by the aforementioned selection means. The 1st aforementioned means of communications is controlled to transmit generated child terminal ID for every child terminal. the aforementioned control means of each child terminal If the aforementioned child terminal ID from the aforementioned parent terminal is received by the 1st aforementioned means of communications The control transfer system of the telephone line characterized by controlling the 2nd aforementioned means of communications to add the aforementioned child ID information to the concerned child terminal ID which received, and to transmit to the aforementioned host computer by the 2nd aforementioned means of communications.

[Claim 2] The aforementioned parent ID information is the control transfer system of the telephone line of the claim 1 publication characterized by being the telephone number about the telephone number of the user of the aforementioned parent terminal.

[Claim 3] The aforementioned parent terminal is the claim 1 characterized by having the 2nd means of communications which communicates with the aforementioned host computer, or the control transfer system of the telephone line given in two.

[Claim 4] The 2nd aforementioned means of communications of the aforementioned parent terminal is the control transfer system of the telephone line of the claim 3 publication characterized by communicating with the aforementioned host computer within the limits of the transmission speed beforehand assigned from the aforementioned host computer.

[Claim 5] The aforementioned parent terminal is the control transfer system of the telephone line of the claim 4 publication characterized by transferring a control of the content which communicates with the aforementioned host computer simultaneously by the 2nd aforementioned means of communications of the n aforementioned child terminals, respectively within the limits of the transmission speed beforehand assigned from the aforementioned host computer.

[Claim 6] The aforementioned parent terminal is the control transfer system of the telephone line of the claim 5 publication characterized by specifying the transmission speed used by the 2nd aforementioned means of communications about at least one of the n aforementioned child terminals in the case of a transfer of a control.

[Claim 7] The aforementioned parent terminal is the control transfer system of the telephone line of the claim 4 publication characterized by transferring a control of the content which communicates with the aforementioned host computer simultaneously, respectively by the 2nd aforementioned means of communications of the aforementioned parent terminal, and the 2nd aforementioned means of communications of the n aforementioned child terminals within the limits of the transmission speed beforehand assigned from the aforementioned host computer.

[Claim 8] The aforementioned parent terminal is the control transfer system of the telephone line of the claim 7 publication characterized by specifying the transmission speed used by the 2nd aforementioned means of communications about the terminal of at least 1 of the aforementioned parent terminal and/or the n aforementioned child terminals in the case of a transfer of a control.

[Claim 9] The aforementioned host computer is the claim 5 characterized by having the transmission-speed Monitoring Department which adjusts so that it may become within the limits of the transmission speed which supervised the sum of transmission speed performed by each 2nd means of communications of the aforementioned parent terminal and the n aforementioned child terminals, and was beforehand assigned to the aforementioned parent terminal, or the control transfer system of the telephone line of any 1 publication of 8.

[Claim 10] The aforementioned transmission-speed Monitoring Department of the aforementioned host computer is the control transfer system of the telephone line of the claim 9 publication characterized by adjusting so that it may decrease according to the rate of the transmission speed currently used by each 2nd means of communications of the aforementioned parent terminal and the n aforementioned child terminals, when the sum of transmission speed performed by each 2nd means of communications of the aforementioned parent terminal and the n aforementioned child terminals exceeds the domain of the transmission speed beforehand assigned to the aforementioned parent terminal.

[Claim 11] The aforementioned transmission-speed Monitoring Department of the aforementioned host computer When the sum of transmission speed performed by each 2nd means of communications of the aforementioned parent terminal and the n

aforementioned child terminals exceeds the domain of the transmission speed beforehand assigned to the aforementioned parent terminal. The claim 6 characterized by adjusting so that the transmission speed about the aforementioned parent terminal with which the transmission speed is not specified in the case and/or the aforementioned child terminal of a transfer of the control to the n aforementioned child terminals may be reduced from the aforementioned parent terminal, or the control transfer system of the telephone line given in eight.

[Claim 12] The aforementioned host computer is the claim 1 characterized by controlling so that the communication service which the aforementioned communication entrepreneur offers is received by the 2nd aforementioned means of communications of each aforementioned child terminal based on the aforementioned child terminal ID and the aforementioned child ID information which were transmitted from the 2nd aforementioned means of communications of each aforementioned child terminal, or the control transfer system of the telephone line of any 1 publication of 11.

[Claim 13] The aforementioned host computer is the control transfer system of the telephone line of the claim 12 publication characterized by having the accounting section which performs accounting which imposes accounting about the communication service which the aforementioned communication entrepreneur offers on user ** which has the aforementioned parent ID information.

[Claim 14] The aforementioned host computer is the claim 1 characterized by performing the control about the connection service to internet as communication service which the aforementioned communication entrepreneur offers, or the control transfer system of the telephone line of any 1 publication of 13.

[Claim 15] The aforementioned host computer is the claim 1 characterized by performing the control about the connection service to other telephones as communication service which the aforementioned communication entrepreneur offers, or the control transfer system of the telephone line of any 1 publication of 14.

[Claim 16] The aforementioned parent terminal is the claim 1 characterized by the aforementioned control means controlling the 1st aforementioned means of communications so that the content information of a control shown about the content of a control transferred [ID / child terminal / aforementioned] with an authentication information to n child terminals chosen with the aforementioned selection means may be transmitted for every child terminal, or the control transfer system of the telephone line of any 1 publication of 15.

[Claim 17] The claim 1 characterized by to include a setting input means set up about the n aforementioned child terminals which are going to transfer a control among lists of the child terminal displayed on a display means display a list of the child terminal which communicated by the 1st aforementioned means of communications on the aforementioned selection means of the aforementioned parent terminal, and the aforementioned display means, or the control transfer system of the telephone line of any 1 publication of 16.

[Claim 18] The aforementioned child terminal is the claim 1 characterized by performing the communication with the aforementioned host computer by the 2nd aforementioned means of communications in response to the part about the function which the aforementioned parent terminal has, or all transfers, or the control transfer system of the telephone line of any 1 publication of 17.

[Claim 19] The aforementioned child terminal is the claim 1 characterized by performing the communication with the aforementioned host computer by the 2nd aforementioned means of communications until it receives the control transfer termination signal of the purport which stops a control transfer by the 1st aforementioned means of communications, or the control transfer system of the telephone line of any 1 publication of 18.

DETAILED DESCRIPTION

[Detailed description]

[0001]

[The technical field to which invention belongs] About the control transfer system of the telephone line, in detail, this invention transfers the royalty of the telephone line from parent terminals, such as a portable telephone, to 1 or two or more child terminals, and relates to the system for planning the deployment of the telephone line.

[0002]

[Prior art] It is becoming general to use two circuits of the telephone line for family yards by the usual cable and the circuit of the mobile communication terminal for individuals by the radio properly, and to be utilized in individual everyday life, in recent years in connection with the rapid spread of mobile communication terminals, such as a portable telephone, PHS (Personal Handyphone System), or PDA (Personal Digital Assistant).

[0003] Moreover, the spread of information communication networks, such as internet in recent years, can receive [the user of an information communication network] now offer of various services of transmission and reception of a mail, acquisition of various informations, the purchase of goods, a reservation of a hotel or a ticket, etc. using an above-mentioned mobile communication terminal.

[0004]

[Object of the Invention] Furthermore, recently, giving a role of complex-terminal equipment equipped with various functions, such as a reception function of various broadcasts, a TV phone function, and a navigation function using two or more satellites twisted to GPS (Global Positioning System:GPS), as gestalt of the portable telephone of the next generation is proposed. Moreover, when one circuit is divided into two or more circuits and each portable telephone uses this divided circuit simultaneously as gestalt of the portable telephone of the next generation, it is expected that the so-called multi-rate function in which two or more concerned portable telephones communicate simultaneously, and a multi-call function are given.

[0005] It is expected that it is expected that it spreads to home electronic equipment, such as television, further, the accessing function to an information communication network is given to all electric appliances at the near future, and the equipment used from such present condition in order that a user may receive a service of an information communication network can be accessed now from the above-mentioned mobile communication terminal and a personal computer to an information communication network through the telephone line etc. because of data communication, the accounting by the service provider, etc.

[0006] In the bottom of inclinations, such as such two or more possession of the telephone line, and telephone functional grant to electric appliances, the importance about a user's authentication becomes still higher. For example, about the candidate of accounting about a service provision etc., if a case so that many and unspecified users may use shared television arranged in the conference room of a station etc., may access to an information communication network on concerned television and may receive a predetermined service is considered, even if it is the case where it should originally consider as many and unspecified concerned users, the candidate's authentication is

actually difficult.

[0007] on the other hand -- for example, each terminal unit which many and unspecified concerned users own -- using -- two or more concerned terminal units -- ID for every terminal unit -- using -- an information communication network -- abbreviation -- it accesses simultaneously, considering as a system which receives the respectively same service is also considered, and such a system, then each user can be specified as an accounting candidate However, inconvenience will arise conversely to make an accounting candidate into the concerned business-firm name shortly, for example.

[0008] On the other hand, it is asked for the configuration of the miniaturization for enabling an easy move, lightweight-izing, etc., the mobile communication terminal originated in this, and there were problems, like that there is a limit of the viewing area in that **** between operations tends to occur that it is hard to carry out operation of a small input key, memory space, and a display and a limitation is in continuous duty time further.

[0009] Although it is desirable that suitable electronic equipment to receive this service provision can be used in accessing to an information communication network in indoor [, such as a house or a station,], and receiving various services to such a problem, if ID of the subscriber's loop and a user etc. will be set as various electronic equipment other than a mobile communication terminal in this case, a management of ID etc. will become complicated or new problems, like the minimum charge of the royalty of the subscriber's loop increases further will arise.

[0010] For example, when a user is going to access to an information communication network and is going to receive the data about a stock price using mobile communication terminals, such as a portable telephone, the problem that the required detailed fraction for users, such as a line graph about transition of a stock price, is not discriminated or displayed for a limit of a viewing area arises. In such a case, although it is appropriate to display this detailed fraction instead of a mobile communication terminal to the displays which have a big screen, such as television of a house, when it is going to realize this, a setup of ID of the subscriber's loop and a user etc. is needed for television etc. However, when other men of a family are going to access to an information communication network using the concerned television, for example, are going to receive a service of a reservation of a ticket etc., in such a case, a setup of a user's ID etc. must be changed each time, and the management is inconvenient to it.

[0011] Furthermore, if it will be assigning the telephone number for every product, respectively in the future when an above-mentioned telephone function is given to all electric appliances, the minimum charge of a telephone will be imposed for each [these] product of every, and a management of each telephone number and the burden in a cost side will become excessive.

[0012] Thus, in the present system, it has the problem that it is difficult to perform accounting according to the deployment of the telephone line, and the intention of an user in spite of the status that certain ** of the further development of the mobile communication terminal in the near future is carried out.

[0013] The purpose of this invention is to offer the system contributed to the enhancement in a service to a user, performing accounting according to the intention of an user planning the deployment of the telephone line at the time of use of an information communication network.

[0014]

[The means for solving a technical problem] The control transfer system of the telephone line concerning this invention The host computer which performs the control about the communication service which a communication entrepreneur offers, It has the parent terminal with which a host computer has an identifiable parent ID information, and a child ID information with an identifiable host computer. It has two or more child terminals which perform the communication with a host computer in response to a transfer of the control from a parent terminal. a parent terminal A selection means to choose n child terminals (for n to be one or more integers) which are going to transfer a control from the child terminals which communicated by the 1st means of communications which communicates with each child terminal, and the 1st means of communications, It has a control means to control the 1st means of communications. a child terminal The 1st means of communications which communicates with a parent terminal, and the 2nd means of communications which communicates with a host computer, It has a control means to control the 1st means of communications and 2nd means of communications. the control means of a parent terminal n child terminal IDs as which a host computer can specify a parent ID information on the basis of a parent ID information are generated to n child terminals chosen by the selection means. The 1st means of communications is controlled to transmit generated child terminal ID for every child terminal. the control means of each child terminal If child terminal ID from a parent terminal is received by the 1st means of communications, it will be characterized by controlling the 2nd means of communications to add a child ID information to the concerned child terminal ID which received, and to transmit to a host computer by the 2nd means of communications.

[0015] Here, as a parent ID information, although it will not be limited especially if a host computer is an identifiable information, it makes a parent terminal preferably the telephone number information about the telephone number of the user of a parent terminal.

[0016] Moreover, it is enabled to communicate with a host computer simultaneously at a parent terminal and a child terminal by considering as the configuration equipped with the 2nd means of communications which communicates with a host computer about the parent terminal. Here, the 2nd means of communications of a parent terminal is made to communicate with a host computer within the limits of the transmission speed beforehand assigned from the host computer. In this case, a parent terminal transfers a control of the content which communicates with a host computer simultaneously by the 2nd means of communications of n child terminals, respectively within the limits of the transmission speed beforehand assigned from the host computer. Furthermore, it is good also as a parent terminal specifying the transmission speed used by the 2nd means of communications about at least one of n child terminals in this case in the case of a transfer of a control.

[0017] In preparing the 2nd means of communications about a parent terminal, a parent terminal transfers a control of the content which communicates with a host computer simultaneously, respectively by the 2nd means of communications of a parent terminal, and the 2nd means of communications of n child terminals within the limits of the transmission speed beforehand assigned from the host computer. In this case, a parent terminal is good also as specifying the transmission speed used by the 2nd means of

communications about the terminal of at least 1 of a parent terminal and/or n child terminals in the case of a transfer of a control.

[0018] A control means considers a parent terminal as the configuration which controls the 1st means of communications so that the content information of a control shown about the content of a control transferred [ID / child terminal] with an authentication information to n child terminals chosen with the selection means may be transmitted for every child terminal.

[0019] Moreover, it considers as the configuration including a setting input means to set up about n child terminals which are going to transfer a control among lists of the child terminal displayed on a display means to display a list of the child terminal which communicated by the 1st means of communications about the selection means of a parent terminal, and the display means.

[0020] On the other hand, about a host computer, the sum of transmission speed performed by each 2nd means of communications of a parent terminal and n child terminals is supervised, and it considers as the configuration which has the transmission-speed Monitoring Department which adjusts so that it may become within the limits of the transmission speed beforehand assigned to the parent terminal.

[0021] Here, when the sum of transmission speed performed by each 2nd means of communications of a parent terminal and n child terminals exceeds the domain of the transmission speed beforehand assigned to the parent terminal, the transmission-speed Monitoring Department of a host computer adjusts so that it may decrease according to the rate of the transmission speed currently used by each 2nd means of communications of a parent terminal and n child terminals.

[0022] Or when the sum of transmission speed performed by each 2nd means of communications of a parent terminal and n child terminals exceeds the domain of the transmission speed beforehand assigned to the parent terminal, the transmission-speed Monitoring Department of a host computer adjusts so that the transmission speed about the parent terminal with which the transmission speed is not specified in the case and/or child terminal of a transfer of the control to n child terminals may be reduced from a parent terminal.

[0023] A host computer is controlled so that the communication service which a communication entrepreneur offers is received by the 2nd aforementioned means of communications of each child terminal based on child terminal ID and the aforementioned child ID information which were transmitted from the 2nd means of communications of each child terminal. In this case, a host computer is taken as the configuration which has the accounting section which performs accounting which imposes accounting about the communication service which a communication entrepreneur offers on user ** which has a parent ID information.

[0024] A host computer is made to perform the control about the connection service to internet as communication service which a communication entrepreneur offers.

[0025] Moreover, a host computer is made to perform the control about the connection service to other telephones as communication service which a communication entrepreneur offers.

[0026] On the other hand, as a configuration of a child terminal, the communication with a host computer shall be performed by the 2nd means of communications in response to the part about the function which a parent terminal has, or all transfers.

[0027] Moreover, a child terminal shall perform the communication with a host computer by the 2nd means of communications until it receives the control transfer termination signal of the purport which stops a control transfer by the 1st means of communications.

[0028]

[Gestalt of implementation of invention] The gestalt of enforcement of this invention is explained in detail, referring to a drawing.

[0029] The conceptual diagram of the control transfer system of the telephone line which applied this invention to drawing 1 is shown.

[0030] with the gestalt of this enforcement, as shown in drawing 1 , as a parent terminal, the portable telephone 1 which is a mobile communication terminal is used, and two or more personal computers (only henceforth a personal computer) 2 of the so-called note type which can be carried use as a child terminal -- having -- both a portable telephone 1 and the personal computer 2 (2A, 2B, ... 2n) -- although -- it can connect now to the host computer 3 which controls the communication service which a communication entrepreneur offers And with the gestalt of the 1st enforcement, it communicates with one a portable telephone 1 and each personal computer 2.

[0031] (Outline configuration of a parent terminal) The portable telephone 1 as a parent terminal has the portable telephone mainframe 10 equipped with the function as a portable telephone, and the transponder 4 as the 1st means of communications for communicating to each personal computer 2.

[0032] The transmission speed (for example, 2Mbps) as which this portable telephone 1 as a parent terminal was determined beforehand is assigned, and the peculiar telephone line is set up.

[0033] As the gestalt of this enforcement shows the portable telephone mainframe 10 of a portable telephone 1 to drawing 1 , an antenna 14 is arranged at the upper part of the mainframe (case) of equipment, and the loudspeaker 17 as a telephone call means, the display 15 as a display means which consists of a liquid crystal panel etc., the operation input section 12 that consists of many key switches as an operation input means, and the microphone 16 as a telephone call means are arranged from the top in the front face of equipment, respectively. In addition, other components of a portable telephone 1 are shown in drawing 2 , and the explanation about these is mentioned later. Moreover, although the transponder 4 serves as the configuration prepared in one with the gestalt of this enforcement at the upper part of the portable telephone mainframe 10 as shown in drawing 1 , of course, it is not limited to this arrangement, and you may be the configuration which makes a transponder 4 removable to the portable telephone mainframe 10 further.

[0034] (Outline configuration of a child terminal) On the other hand, the personal computer 2 as a child terminal has the mainframe 20 equipped with the function as a usual computer of a personal computer, and the interrogator 5 as the 1st means of communications for communicating to a portable telephone 1.

[0035] With the gestalt of this enforcement, **** of the case upper part side which has the display 24 which consists of a liquid-crystal-display display has become possible to the case installation [the mainframe 20 of a personal computer which has the operation input section 22 by many key switches] side, and the personal computer 2 serves as the configuration that the interrogator 5 was attached in this case upper part side, as shown in drawing 1 . Here, the display 24 of the mainframe 20 of a personal computer has [a

personal computer 2] a viewing area (area) larger than the display 15 of a portable telephone 1, and each key of the operation input section 22 is large rather than each key switch of the operation input section 12 of a portable telephone 1.

[0036] Although the interrogator 5 serves as the configuration prepared in one with the gestalt of this enforcement at the upper part of the mainframe 20 of a personal computer, of course, it is not limited to this arrangement, and you may be the configuration which makes an interrogator 5 removable to the mainframe 20 of a personal computer further.

[0037] (Outline configuration of a host computer) The host computer 3 is connected with internet or various kinds of information communication networks as communication service which a communication entrepreneur offers. And a host computer 3 offers the various services according to the concerned demand according to the various demands from the parent terminal mentioned above or a child terminal. Here, as various services which a host computer 3 performs, the connection service with the telephone by other cables or radios which serve as a called party, for example, the send-data service which transmits the various data from above-mentioned internet and various above-mentioned information communication networks are included.

[0038] Moreover, the host computer 3 has the authentication section which is not illustrated [which attests whether you are a regular user] based on the authentication information from a parent terminal or a child terminal, and only when it accepts as a regular user in the authentication section, it offers the service according to the demand from a parent terminal or a child terminal. And a host computer 3 has the non-illustrated accounting section, and performs predetermined accounting to the regular user who attested in the aforementioned authentication section.

[0039] Furthermore, a host computer 3 has the transmission-speed allocation section which is not illustrated [which assigns the transmission speed according to the demand from a portable telephone 1 within the limits of this transmission speed to two or more child terminals which the portable telephone 1 chose] while it assigns a predetermined transmission speed (for example, 2Mbpses) beforehand to the portable telephone 1 which is a parent terminal. Further again, a host computer 3 supervises the transmission speed to the host computer 3 of two or more child terminals which the portable telephone 1 and the portable telephone 1 chose, and has the transmission-speed Monitoring Department for adjusting so that the sum of the transmission speed of parents and each child terminal may not exceed the transmission speed (for example, 2Mbpses) which a parent terminal has.

[0040] (Circuit arrangement of a parent terminal) Next, with reference to drawing 2 , the circuit arrangement of the portable telephone 1 and the personal computer 2 are explained. As shown in drawing 2 , the portable telephone mainframe 10 of a portable telephone 1 CPU11 which controls this portable telephone 1 whole, and the operation input section 12 explained by drawing 1 , The transceiver section 13 and the antenna 14 as the 2nd means of communications which communicate with a host computer 3, It has the display 15 and the microphone 16 which were explained by drawing 1 and the loudspeaker 17, the vibrator 18 which vibrates the portable telephone 1 whole, and the memory 19 in which various kinds of informations mentioned later are stored.

[0041] CPU11 of the portable telephone mainframe 10 controls the transceiver section 13, the display 15, the loudspeaker 17, the vibrator 18, and the memory 19 based on the alter operation by the control program about a control of the portable telephone 1 whole,

and the operation input section 12. Moreover, it connects with the communications department 41 of the transponder 4 mentioned later, and CPU11 of the portable telephone mainframe 10 controls each part based on the signal inputted from the communications department 41.

[0042] For example, by the portable telephone mainframe 10, if the telephone number of the telephone of a called party which should be connected is inputted based on the alter operation by the operation input section 12, the concerned telephone number will be displayed on a display 15 by control of CPU11, and the radio signal for the line connection with a called party will be transmitted by it, through the antenna 14 connected to the transceiver section 13 and the transceiver section 13. A host computer 3 receives this radio signal transmitted from the portable telephone 1, and performs processing which aims at connection with the telephone of a called party.

[0043] And if the telephone and circuit of a called party are connected, by the portable telephone mainframe 10, by control of CPU11, the vocal sound which the vocal sound from the telephone of a called party is outputted as vocal sound from a loudspeaker 17, and the user by the side of the call origination to this utters is changed into an electrical signal through a microphone 16, and by the transceiver section 13, predetermined processing will be performed and it will be transmitted to the telephone of a called party as a radio signal for a telephone call through the antenna 14 and the host computer 3

[0044] When the radio signal for the line connection transmitted through the host computer 3 by the portable telephone mainframe 10 from the telephone of the other party which becomes a call origination side on the other hand is received in the transceiver section 13 through an antenna 14, by control of CPU11 If arrival-of-the-mail sound is outputted from a loudspeaker 17, or vibrator 18 vibrates according to the established state based on the alter operation of the operation input section 12 and the predetermined key of the operation input section 12 is operated by the user of a called party A circuit is connected a call origination side and it will be in the status in which the telephone call with the telephone of the other party is possible like ****.

[0045] Furthermore, by the portable telephone mainframe 10, if the telephone number to the internet which should be connected is inputted based on the alter operation by the operation input section 12, the concerned telephone number will be displayed on a display 15 by control of CPU11, and the radio signal for the line connection to internet will be transmitted by it, through the antenna 14 connected to the transceiver section 13 and the transceiver section 13. Here, a host computer 3 receives this radio signal transmitted from the portable telephone 1, and performs processing which aims at connection with internet.

[0046] And when internet and a circuit are connected, by the portable telephone mainframe 10, it is stored in memory 19 based on the alter operation by the operation input section 12 about the data which the image data sent from an internet side, the alphabetic data about a mail, etc. are displayed on a display 15 by control of CPU11, and it is outputted from a loudspeaker 17 about voice data, among these an user needs by it.

[0047] The operation input section 12 of the portable telephone mainframe 10 is operated in case various setup in the case of performing the communication with the interrogator 5 of a personal computer 2 through a transponder 4 is performed in addition to this.

[0048] The memory 19 of the portable telephone mainframe 10 memorizes the information about the communication result which mentions later the detail sent from an

interrogator 5 side, after performing the communication with the interrogator 5 of a personal computer 2 through a transponder 4.

[0049] Moreover, the data (henceforth a telephone number information) of the telephone number about a portable telephone 1 and the data (henceforth the content information of a control) about the content of a control transferred to a child terminal (personal computer 2) side are stored, each of these informations are read by control of CPU11, and memory 19 is transmitted to the interrogator 5 side of a personal computer 2.

[0050] That is, the transponder 4 of a portable telephone 1 has the communications department 41 which performs transmission and reception of the interrogator 5 of a personal computer 2, and data, CPU11 of the portable telephone mainframe 10 reads the telephone number information and the content information of a control in memory 19, and each [these] information is outputted with the gestalt of a radio signal from the communications department 41 by supplying each [these] information to the communications department 41 with a control signal. In addition, as gestalt of a radio signal, a Hertzian wave, infrared radiation, etc. are usable.

[0051] Furthermore, in the transponder 4 of a portable telephone 1, it precedes transmitting a telephone number information and the content information of a control, and based on a control of CPU11 of the portable telephone mainframe 10, the connection signal for establishing the connection with the interrogator 5 of a personal computer 2 outputs from the communications department 41, and mentions later about this processing.

[0052] (Circuit arrangement of a child terminal) Next, the circuit arrangement of the personal computer 2 by the side of a child terminal are explained. As shown in drawing 2 , the mainframe 20 of a personal computer of a personal computer 2 CPU21 which controls this mainframe of personal computer 20 whole, and the operation input section 22 explained by drawing 1 , The transceiver section 23 equipped with the modem for transmitting and receiving data by connecting by the host computer 3, the cable, or the radio etc., The display 24 explained by drawing 1 , and the hard disk drive 25 in which various data are stored (HDD), It has the interface section (I / F section) 26 for aiming at connection with external instruments, such as a printer, external storage, a card modem, and other personal computers, and the loudspeaker 27 which outputs vocal sound.

[0053] CPU21 of the mainframe 20 of a personal computer controls the transceiver section 23, the display 24, HDD25, the I / F section 26, and the loudspeaker 27 based on the alter operation by a predetermined control program and the predetermined operation input section 22. Moreover, it connects with the communications department 51 of the interrogator 5 mentioned later, and CPU21 of the mainframe 20 of a personal computer controls each part based on the signal inputted from the communications department 51.

[0054] For example, by the mainframe 20 of a personal computer, where the telephone line 28 and the transceiver section 23 which stand in a row to a host computer 3 are connected with a cable, if the telephone number to the internet which should be connected is inputted by the alter operation by the operation input section 22, the concerned telephone number will be displayed on a display 24 by control of CPU21, and the signal for the line connection to internet will be transmitted to a host computer 3 through the transceiver section 23 and the aforementioned telephone line 28. A host computer 3 will perform processing which aims at connection with internet, if this signal transmitted from the mainframe 2 of a personal computer is received.

[0055] And by the mainframe 20 of a personal computer, when internet and a circuit are connected, about the data which the image data sent from internet through a host computer 3, the alphabetic data about a mail, etc. are displayed on a display 24 by control of CPU21, and are outputted as vocal sound from a loudspeaker 27 about voice data, among these an user needs, it is stored in HDD25 based on the alter operation by the operation input section 22 (down load).

[0056] The operation input section 22 of the mainframe 20 of a personal computer is operated in case various setup in the case of in addition to this performing the communication with the transponder 4 of the cellular-phone machine 1 through the interrogator 5 mentioned later is performed.

[0057] It connects with CPU21 of the mainframe 20 of a personal computer, and the interrogator 5 of a personal computer 2 has the communications department 51 which performs transmission and reception of the transponder 4 of a portable telephone 1, and data.

[0058] In the interrogator 5 of a personal computer 2, based on the control signal outputted from CPU21 of the mainframe 20 of a personal computer, the acknowledge signal for establishing the connection with the transponder 4 of a portable telephone 1 outputs from the communications department 51, and mentions later about this processing.

[0059] (Transfer of the control to a child terminal from a parent terminal) two or more personal computer 2A whose portable telephones 1 which are a parent terminal in the portable telephone 1 and the personal computer 2 which were considered as such a configuration are child terminals, 2B, and ... by transferring a control as follows 2n, so to speak, each personal computer 2 executes by proxy processing which a portable telephone 1 originally performs, or a portable telephone 1 and each personal computer 2 communicate with a host computer 3 simultaneously

[0060] Hereafter, processing of this control transfer is explained with reference to the flow chart of drawing 3. in addition, personal computer 2A of the transponder 4 of a portable telephone 1 and a plurality, 2B, and ... it is a flow chart for explaining processing performed between each 2n interrogator 5 and the host computer 3 [drawing 3]

[0061] With the gestalt of this enforcement, first, the transponder 4 of a portable telephone 1 is close brought into predetermined distance to each personal computers [2A-2n] interrogator 5, and the predetermined key switch of the operation input section 12 is pushed. At this time, a connection signal is transmitted from the communications department 41 of a transponder 4 in a portable telephone 1, and each personal computers 2A-2n as a child terminal receive the connection signal from the portable telephone 1 which is a parent terminal (step S1).

[0062] At the following step S2, personal computers 2A-2n transmit an acknowledge signal to a portable telephone 1. this acknowledge signal -- each personal computer 2 -- it considers as the signal which is different every A-2n, respectively, for example, is made to include a child ID information peculiar to the concerned personal computer 2 Here, a host computer 3 is an identifiable information, for example, a child ID information peculiar to the concerned personal computer 2 is an information about the bank account of the information about the part number of a personal computer 2, the information about the owner of a personal computer 2, and the owner of a personal computer 2 etc. Moreover, when it has the telephone number with the concerned original personal

computer 2, you may include the information about the telephone number.

[0063] The portable telephone 1 which received this acknowledge signal from each personal computers 2A-2n is the following step S3, it urges an user to operate the operation input section 12, shifts to step S4, and waits for the input of the operation input section 12 so that the list about each child terminal (personal computers 2A-2n) may be displayed on a display 15 and the child terminal used as the object which transfers a control may be chosen. In addition, this example explains the case where personal computers [each / 2A-2n] all are chosen in the operation input section 12.

[0064] If the input of the operation input section 12 is performed by step S4 and selection of a child terminal is performed, it will shift to step S5 and only a selected number of a child terminal of parts will publish child terminal ID. This child terminal ID is taken as ID which can recognize that the portable telephone 1 whose host computer 3 is a parent terminal publishes, and can discriminate each of two or more child terminals. Suppose that a telephone number information which serves as the telephone number which added the predetermined sign to the telephone number of the portable telephone 1 which is a parent terminal, and is different for every child terminal as a child terminal ID is published with the gestalt of this enforcement.

[0065] To the 2nd set of "090-1234-5678 -01" and child terminals, it is [as opposed to / the 1st set of a child terminal / when the telephone number of a portable telephone 1 is specifically "090-1234 -5678"] "090-1234-5678 -02" ... A branch number number is added and assigned.

[0066] In addition, if it is ID which can recognize that the portable telephone 1 whose host computer 3 is a parent terminal publishes as gestalt of enforcement of child terminal ID, and can discriminate each of two or more child terminals, it will not be restricted to this.

[0067] At the following step S6, the telephone number information as a generated child terminal ID is individually transmitted to each child terminal. With the gestalt of this enforcement, the authentication information on the portable telephone 1 which is a parent terminal, and the content information of a control about the content of a control transferred to a child terminal are individually transmitted to each child terminal with a telephone number information by step S6. Here, with the authentication information on a portable telephone 1, it considers as the password information which the user of a portable telephone 1 set up, and the user of a portable telephone 1 considers as the information which can be changed suitably by operation of the operation input section 12.

[0068] In addition, in this example, it shall consider as the control which accesses to the internet which is an information communication network, and downloads predetermined charged data as content of a control transferred to each personal computers 2A-2n, and the content information of a control which shows the purport which transfers this content of a control shall be transmitted to each personal computers [2A-2n] communications department 51 from the communications department 41 of a portable telephone 1. Here, the content information of a control is stored in memory 19, displays the list on the display 15 of a portable telephone 1 in advance of sending, when an user chooses from the list as which the operation input section 12 is operated and it was displayed, reads the information to which CPU11 corresponds from memory 19, and transmits it as a radio signal from the communications department 41 of a transponder 4.

[0069] Although the same content information of a control is transmitted to each personal

computers 2A-2n in this example in order to transfer the same content of a control to each personal computers 2A-2n which are child terminals, the content different for every child terminal of a control may be transferred, and the content information of a control which is mutually different to personal computers 2A-2n in that case will be transmitted. For example, the content information of a control which is different to each personal computers 2A-2n, respectively is transmitted by operation of the operation input section 12 to set up the transmission speed which is mutually different to personal computers 2A-2n. Moreover, the content information different only to personal computer 2A of a control is transmitted by operation of the operation input section 12 to set up only the transmission speed which personal computer 2A uses, for example.

[0070] If the signal including the telephone number information, the authentication information, and the content information of a control from a portable telephone 1 is received at step S7, each personal computers 2A-2n are the following step S8, will add the aforementioned child ID information to each [these] information, and will transmit it to a host computer 3. If each information from each personal computers 2A-2n is received by step S9, a host computer 3 is the following step S10, and the aforementioned authentication section will be step S11 which attests and continues by collating a telephone number information and an authentication information, and it will perform processing which connects each child terminal (personal computers 2A-2n) and internet.

[0071] Here, by the aforementioned transmission-speed allocation section, when the information on a purport that transmission speed is specified to be the content information of a control received from each personal computers 2A-2n is included, a host computer 3 assigns transmission speed to each personal computers 2A-2n so that each personal computers 2A-2n may communicate at the specified concerned speed.

[0072] And after this, a host computer 3 supervises the connection status of each personal computers 2A-2n and internet at the aforementioned transmission-speed Monitoring Department, it supervises it so that the sum of the transmission speed which is communicating with each personal computers 2A-2n may not exceed the transmission speed (for example, 2Mbpses) which a parent terminal has, and when it exceeds, it adjusts.

[0073] Here, as the adjustment technique when the sum of the transmission speed which is communicating with each personal computers 2A-2n exceeds the transmission speed (for example, 2Mbpses) which the portable telephone 1 as a parent terminal has, a host computer 3 is adjusted at the aforementioned transmission-speed Monitoring Department so that it may decrease according to the rate of the transmission speed currently used in each transceiver section 23 of each n personal computers 2A-2n. Moreover, as other adjustment technique, a host computer 3 is adjusted so that the transmission speed about the personal computer 2 with which transmission speed is not specified from a portable telephone 1 in the case of a transfer of the control to each n personal computers 2A-2n (in the case of sending of the content information of a control) may be reduced.

[0074] Furthermore, a host computer 3 performs accounting in the aforementioned accounting section so that the user who has the royalty of the telephone number of a portable telephone 1 may be burdened with the connection charge gold (telephone rate) to the connection with the internet about each personal computers 2A-2n.

[0075] And each personal computers 2A-2n perform the control which downloads predetermined charged data to HDD25 of each mainframe 20 of a personal computer at

continuing step S12. By this, the user who has the royalty of the telephone number of a portable telephone 1 will be burdened with the service charge gold (accounting) to a down load of charged data by the accounting section of a host computer 3.

[0076] After processing of a down load is completed, it transmits to the transponder 4 of a portable telephone 1, a series of processing ends the radio signal which included the various informations about a communication result at step S13, and the control transfer to each personal computers 2A-2n ends the personal computers [each / 2A-2n] interrogator 5 from a portable telephone 1. Here, as an information about a communication result, the information about the communication time which is a connect time to internet, a telephone rate, the service charge gold (accounting) to a down load of charged data, the down-load amount of data, etc. is included, for example.

[0077] In addition, the user of a portable telephone 1 is made to perform predetermined operation in the operation input section 12 to end these processings by each personal computers 2A-2n on the way. If the control transfer termination signal of the purport which stops a control transfer from the communications department 41 of a transponder 4 is transmitted by this operation based on a control of CPU11 of a portable telephone 1 and the communications department 51 which are each personal computers 2A-2n receives this Based on a control of CPU21, the command of a connection end is transmitted to a host computer 3 from the transceiver section 23, and the control transfer to each personal computers 2A-2n is completed from a portable telephone 1 by cutting the connection with internet by processing of a host computer 3.

[0078] With the gestalt of this enforcement, it is canceled from the burden which becomes unnecessary to set up the peculiar telephone number to each personal computers 2A-2n by the side of a child terminal, and pays the minimum charge about the royalty of the new telephone number by performing such a control transfer to two or more child terminals from a parent terminal.

[0079] Moreover, about the connection with the host computer 3 and internet, even if it is the case where the telephone number peculiar to each personal computers 2A-2n by the side of a child terminal is set up, since it is carried out nothing with regards to a setup of the concerned telephone number based on the telephone number of the portable telephone 1 by the side of a parent terminal, in advance of connection, it is not necessary to change a setup of the telephone number by the side of each personal computer 2A-2n. Namely, even if who a personal computers [which are child terminals / each / 2A-2n] owner is according to the gestalt of this enforcement Accounting about a telephone rate or service charge gold will be imposed to the user of the portable telephone 1 by the side of a parent terminal. for example, even when each personal computers 2A-2n are installed in the locations (for example, showroom etc.) where many and unspecified men gather It is enabled to carry out accounting of the telex-rate gold which acquisition of a specific service took, the service-provision tariff, etc. pertinently to a personal computers [each / 2A-2n] user (for it to be the user of a portable telephone 1 in this case) etc. irrespective of a personal computers [each / 2A-2n] possession name.

[0080] Moreover, since the data to download are saved at each personal computers [by the side of a child terminal / 2A-2n] HDD25, it is not necessary to enlarge storage capacity of memory 19 in the portable telephone 1 by the side of a parent terminal, and since it is not necessary to increase the capacity of a non-illustrated power cell, it is enabled to maintain small [of equipment], and lightweight-ization. Furthermore, since

the downloaded data are read from HDD25 and displayed by the display 24 of the mainframe 20 of a personal computer, in the portable telephone 1 by the side of a parent terminal, there is no need of enlarging area of the display 15 of the portable telephone mainframe 10, and it is enabled to maintain small [of equipment], and lightweight-ization.

[0081] Further again, since there are few amounts of the data exchanged by the transponder 4 by the side of a parent terminal and the interrogator 5 by the side of a child terminal, it is enabled to constitute the communications departments 41 and 51 in transponder 4 and interrogator 5 both sides using a simple interface.

[0082] In addition, although the gestalt of enforcement mentioned above explained the example for which the transceiver section 23 of the personal computer 2 by the side of a child terminal downloads the data from internet through a cable signal from a host computer 3, when each child terminal downloads data through a radio signal, it is possible to carry out by the same processing.

[0083] Although the gestalt of enforcement mentioned above explained the example which made the configuration of a parent terminal the portable telephone 1 which consists of a transponder 4 and a portable telephone mainframe 10, the configuration by the side of a parent terminal cannot be limited to this, and a transponder 4 can attach it, or it can be applied to the various terminals which can be built in. A transponder 4 attaches or it can apply as a terminal which can be built in suitable for various mobile communication terminals, such as PHS (Personal Handyphone System) or PDA (Personal Digital Assistant). Moreover, with the gestalt of enforcement mentioned above, since a parent terminal side does not need to communicate with a host computer 3, as a configuration of a parent terminal, it is suitably applicable also to a product like the so-called remote controller or an IC card.

[0084] In addition, it is an example when the portable telephone 1 of a parent terminal transfers all of the transmission speed (2Mbps) which oneself has with the gestalt of enforcement mentioned above to the personal computers 2A-2n which are child terminals. In this case, during a communication of the personal computers 2A-2n which are child terminals, since the transmission speed which oneself has is lost, the communication of the portable telephone 1 of a parent terminal to the host computer 3 by the transceiver section 13 and the antenna 14 of a portable telephone 1 becomes impossible.

[0085] The portable telephone 1 is able to transfer a part of transmission speed (2Mbps) (for example, 1Mbps) which oneself has to personal computers 2A-2n. on the other hand, in this case It is enabled to perform the communication to a host computer 3 simultaneously with the portable telephone 1 of a parent terminal, and the personal computers 2A-2n of a child terminal, and is enabled to perform data communication through the host computer 3 of a portable telephone 1 and personal computers [2A-2n] between etc.

[0086] In addition, it is possible to carry out by the same processing as **** in this case to the portable telephone 1 and the personal computers 2A-2n about the accounting by monitoring of the transmission speed by authentication by the aforementioned authentication section of a host computer 3, assignment of the transmission speed by the aforementioned transmission-speed allocation section, and the aforementioned transmission-speed Monitoring Department and adjustment, and the aforementioned

accounting section.

[0087] Although the gestalt of enforcement mentioned above explained the example which used the configuration of a child terminal as the personal computer 2 which consists of an interrogator 5 and a mainframe 20 of a personal computer, the configuration by the side of a child terminal cannot be limited to this, and an interrogator 5 can attach it, or it can be applied to the various electric appliances which can be built in.

[0088] An interrogator 5 attaches, as an example of the various electric appliances which can be built in Not to mention the portable telephone which has the same configuration as the parent terminal 1, television, Radio, a camera, the record regenerative apparatus of a picture image or voice, an air conditioning machine (air-conditioner), Home use, such as a microwave oven and facsimile apparatus, or the electronic equipment for offices, By mentioning the public common device used for many and unspecified persons still like various vending machines, and giving the communication facility to a host computer 3 to these various electric appliances Various services can be received through a host computer 3, without setting up the original telephone number etc.

[0089] The content of the control transferred from a parent terminal to a child terminal is not limited to an above-mentioned example, and when a child terminal is [for example,] a portable telephone, it wears and it can transfer [the control only for arrival of the mail, the control only for dispatch, and] a control of both sides of dispatch etc.

[0090] Moreover, although [the gestalt of above-mentioned enforcement] transmission and reception of the data between a parent terminal and a child terminal are performed through a radio signal, it is not limited to this but, of course, you may carry out through a cable signal.

[0091]

[Effect of the invention] It is enabled to offer the system contributed to the enhancement in a service to a user, performing accounting according to the intention of an user according to this invention, as explained above planning the deployment of the telephone line at the time of use of an information communication network.

TECHNICAL FIELD

[The technical field to which invention belongs] About the control transfer system of the telephone line, in detail, this invention transfers the royalty of the telephone line from parent terminals, such as a portable telephone, to 1 or two or more child terminals, and relates to the system for planning the deployment of the telephone line.

PRIOR ART

[Prior art] It is becoming general to use two circuits of the telephone line for family yards by the usual cable and the circuit of the mobile communication terminal for individuals by the radio properly, and to be utilized in individual everyday life, in recent years in connection with the rapid spread of mobile communication terminals, such as a portable telephone, PHS (Personal Handyphone System), or PDA (Personal Digital Assistant).

[0003] Moreover, the spread of information communication networks, such as internet in recent years, can receive [the user of an information communication network] now offer of various services of transmission and reception of a mail, acquisition of various informations, the purchase of goods, a reservation of a hotel or a ticket, etc. using an above-mentioned mobile communication terminal.

EFFECT OF THE INVENTION

[Effect of the invention] It is enabled to offer the system contributed to the enhancement in a service to a user, performing accounting according to the intention of an user according to this invention, as explained above planning the deployment of the telephone line at the time of use of an information communication network.

TECHNICAL PROBLEM

[Object of the Invention] Furthermore, recently, giving a role of complex-terminal equipment equipped with various functions, such as a reception function of various broadcasts, a TV phone function, and a navigation function using two or more satellites twisted to GPS (Global Positioning System:GPS), as gestalt of the portable telephone of the next generation is proposed. Moreover, when one circuit is divided into two or more circuits and each portable telephone uses this divided circuit simultaneously as gestalt of the portable telephone of the next generation, it is expected that the so-called multi-rate function in which two or more concerned portable telephones communicate simultaneously, and a multi-call function are given.

[0005] It is expected that it is expected that it spreads to home electronic equipment, such as television, further, the accessing function to an information communication network is given to all electric appliances at the near future, and the equipment used from such present condition in order that a user may receive a service of an information communication network can be accessed now from the above-mentioned mobile communication terminal and a personal computer to an information communication network through the telephone line etc. because of data communication, the accounting by the service provider, etc.

[0006] In the bottom of inclinations, such as such two or more possession of the telephone line, and telephone functional grant to electric appliances, the importance about a user's authentication becomes still higher. For example, about the candidate of accounting about a service provision etc., if a case so that many and unspecified users may use shared television arranged in the conference room of a station etc., may access to an information communication network on concerned television and may receive a predetermined service is considered, even if it is the case where it should originally consider as many and unspecified concerned users, the candidate's authentication is actually difficult.

[0007] on the other hand -- for example, each terminal unit which many and unspecified concerned users own -- using -- two or more concerned terminal units -- ID for every terminal unit -- using -- an information communication network -- abbreviation -- it accesses simultaneously, considering as a system which receives the respectively same service is also considered, and such a system, then each user can be specified as an accounting candidate However, inconvenience will arise conversely to make an accounting candidate into the concerned business-firm name shortly, for example.

[0008] On the other hand, it is asked for the configuration of the miniaturization for enabling an easy move, lightweight-izing, etc., the mobile communication terminal originated in this, and there were problems, like that there is a limit of the viewing area in that **** between operations tends to occur that it is hard to carry out operation of a small input key, memory space, and a display and a limitation is in continuous duty time further.

[0009] Although it is desirable that suitable electronic equipment to receive this service provision can be used in accessing to an information communication network in indoor [, such as a house or a station,], and receiving various services to such a problem, if ID of

the subscriber's loop and a user etc. will be set as various electronic equipment other than a mobile communication terminal in this case, a management of ID etc. will become complicated or new problems, like the minimum charge of the royalty of the subscriber's loop increases further will arise.

[0010] For example, when a user is going to access to an information communication network and is going to receive the data about a stock price using mobile communication terminals, such as a portable telephone, the problem that the required detailed fraction for users, such as a line graph about transition of a stock price, is not discriminated or displayed for a limit of a viewing area arises. In such a case, although it is appropriate to display this detailed fraction instead of a mobile communication terminal to the displays which have a big screen, such as television of a house, when it is going to realize this, a setup of ID of the subscriber's loop and a user etc. is needed for television etc. However, when other men of a family are going to access to an information communication network using the concerned television, for example, are going to receive a service of a reservation of a ticket etc., in such a case, a setup of a user's ID etc. must be changed each time, and the management is inconvenient to it.

[0011] Furthermore, if it will be assigning the telephone number for every product, respectively in the future when an above-mentioned telephone function is given to all electric appliances, the minimum charge of a telephone will be imposed for each [these] product of every, and a management of each telephone number and the burden in a cost side will become excessive.

[0012] Thus, in the present system, it has the problem that it is difficult to perform accounting according to the deployment of the telephone line, and the intention of an user in spite of the status that certain ** of the further development of the mobile communication terminal in the near future is carried out.

[0013] The purpose of this invention is to offer the system contributed to the enhancement in a service to a user, performing accounting according to the intention of an user planning the deployment of the telephone line at the time of use of an information communication network.

MEANS

[The means for solving a technical problem] The control transfer system of the telephone line concerning this invention The host computer which performs the control about the communication service which a communication entrepreneur offers, It has the parent terminal with which a host computer has an identifiable parent ID information, and a child ID information with an identifiable host computer. It has two or more child terminals which perform the communication with a host computer in response to a transfer of the control from a parent terminal. a parent terminal A selection means to choose n child terminals (for n to be one or more integers) which are going to transfer a control from the child terminals which communicated by the 1st means of communications which communicates with each child terminal, and the 1st means of communications, It has a control means to control the 1st means of communications. a child terminal The 1st means of communications which communicates with a parent terminal, and the 2nd means of communications which communicates with a host computer, It has a control means to control the 1st means of communications and 2nd means of communications. the control means of a parent terminal n child terminal IDs as which a host computer can specify a parent ID information on the basis of a parent ID information are generated to n child terminals chosen by the selection means. The 1st means of communications is controlled to transmit generated child terminal ID for every child terminal. the control means of each child terminal If child terminal ID from a parent terminal is received by the 1st means of communications, it will be characterized by controlling the 2nd means of communications to add a child ID information to the concerned child terminal ID which received, and to transmit to a host computer by the 2nd means of communications.

[0015] Here, as a parent ID information, although it will not be limited especially if a host computer is an identifiable information, it makes a parent terminal preferably the telephone number information about the telephone number of the user of a parent terminal.

[0016] Moreover, it is enabled to communicate with a host computer simultaneously at a parent terminal and a child terminal by considering as the configuration equipped with the 2nd means of communications which communicates with a host computer about the parent terminal. Here, the 2nd means of communications of a parent terminal is made to communicate with a host computer within the limits of the transmission speed beforehand assigned from the host computer. In this case, a parent terminal transfers a control of the content which communicates with a host computer simultaneously by the 2nd means of communications of n child terminals, respectively within the limits of the transmission speed beforehand assigned from the host computer. Furthermore, it is good also as a parent terminal specifying the transmission speed used by the 2nd means of communications about at least one of n child terminals in this case in the case of a transfer of a control.

[0017] In preparing the 2nd means of communications about a parent terminal, a parent terminal transfers a control of the content which communicates with a host computer simultaneously, respectively by the 2nd means of communications of a parent terminal, and the 2nd means of communications of n child terminals within the limits of the

transmission speed beforehand assigned from the host computer. In this case, a parent terminal is good also as specifying the transmission speed used by the 2nd means of communications about the terminal of at least 1 of a parent terminal and/or n child terminals in the case of a transfer of a control.

[0018] A control means considers a parent terminal as the configuration which controls the 1st means of communications so that the content information of a control shown about the content of a control transferred [ID / child terminal] with an authentication information to n child terminals chosen with the selection means may be transmitted for every child terminal.

[0019] Moreover, it considers as the configuration including a setting input means to set up about n child terminals which are going to transfer a control among lists of the child terminal displayed on a display means to display a list of the child terminal which communicated by the 1st means of communications about the selection means of a parent terminal, and the display means.

[0020] On the other hand, about a host computer, the sum of transmission speed performed by each 2nd means of communications of a parent terminal and n child terminals is supervised, and it considers as the configuration which has the transmission-speed Monitoring Department which adjusts so that it may become within the limits of the transmission speed beforehand assigned to the parent terminal.

[0021] Here, when the sum of transmission speed performed by each 2nd means of communications of a parent terminal and n child terminals exceeds the domain of the transmission speed beforehand assigned to the parent terminal, the transmission-speed Monitoring Department of a host computer adjusts so that it may decrease according to the rate of the transmission speed currently used by each 2nd means of communications of a parent terminal and n child terminals.

[0022] Or when the sum of transmission speed performed by each 2nd means of communications of a parent terminal and n child terminals exceeds the domain of the transmission speed beforehand assigned to the parent terminal, the transmission-speed Monitoring Department of a host computer adjusts so that the transmission speed about the parent terminal with which the transmission speed is not specified in the case and/or child terminal of a transfer of the control to n child terminals may be reduced from a parent terminal.

[0023] A host computer is controlled so that the communication service which a communication entrepreneur offers is received by the 2nd aforementioned means of communications of each child terminal based on child terminal ID and the aforementioned child ID information which were transmitted from the 2nd means of communications of each child terminal. In this case, a host computer is taken as the configuration which has the accounting section which performs accounting which imposes accounting about the communication service which a communication entrepreneur offers on user ** which has a parent ID information.

[0024] A host computer is made to perform the control about the connection service to internet as communication service which a communication entrepreneur offers.

[0025] Moreover, a host computer is made to perform the control about the connection service to other telephones as communication service which a communication entrepreneur offers.

[0026] On the other hand, as a configuration of a child terminal, the communication with

a host computer shall be performed by the 2nd means of communications in response to the part about the function which a parent terminal has, or all transfers.

[0027] Moreover, a child terminal shall perform the communication with a host computer by the 2nd means of communications until it receives the control transfer termination signal of the purport which stops a control transfer by the 1st means of communications.

[0028]

[Gestalt of implementation of invention] The gestalt of enforcement of this invention is explained in detail, referring to a drawing.

[0029] The conceptual diagram of the control transfer system of the telephone line which applied this invention to drawing 1 is shown.

[0030] with the gestalt of this enforcement, as shown in drawing 1, as a parent terminal, the portable telephone 1 which is a mobile communication terminal is used, and two or more personal computers (only henceforth a personal computer) 2 of the so-called note type which can be carried use as a child terminal -- having -- both a portable telephone 1 and the personal computer 2 (2A, 2B, ... 2n) -- although -- it can connect now to the host computer 3 which controls the communication service which a communication entrepreneur offers And with the gestalt of the 1st enforcement, it communicates with one a portable telephone 1 and each personal computer 2.

[0031] (Outline configuration of a parent terminal) The portable telephone 1 as a parent terminal has the portable telephone mainframe 10 equipped with the function as a portable telephone, and the transponder 4 as the 1st means of communications for communicating to each personal computer 2.

[0032] The transmission speed (for example, 2Mbpses) as which this portable telephone 1 as a parent terminal was determined beforehand is assigned, and the peculiar telephone line is set up.

[0033] As the gestalt of this enforcement shows the portable telephone mainframe 10 of a portable telephone 1 to drawing 1, an antenna 14 is arranged at the upper part of the mainframe (case) of equipment, and the loudspeaker 17 as a telephone call means, the display 15 as a display means which consists of a liquid crystal panel etc., the operation input section 12 that consists of many key switches as an operation input means, and the microphone 16 as a telephone call means are arranged from the top in the front face of equipment, respectively. In addition, other components of a portable telephone 1 are shown in drawing 2, and the explanation about these is mentioned later. Moreover, although the transponder 4 serves as the configuration prepared in one with the gestalt of this enforcement at the upper part of the portable telephone mainframe 10 as shown in drawing 1, of course, it is not limited to this arrangement, and you may be the configuration which makes a transponder 4 removable to the portable telephone mainframe 10 further.

[0034] (Outline configuration of a child terminal) On the other hand, the personal computer 2 as a child terminal has the mainframe 20 equipped with the function as a usual computer of a personal computer, and the interrogator 5 as the 1st means of communications for communicating to a portable telephone 1.

[0035] With the gestalt of this enforcement, **** of the case upper part side which has the display 24 which consists of a liquid-crystal-display display has become possible to the case installation [the mainframe 20 of a personal computer which has the operation input section 22 by many key switches] side, and the personal computer 2 serves as the

configuration that the interrogator 5 was attached in this case upper part side, as shown in drawing 1 . Here, the display 24 of the mainframe 20 of a personal computer has [a personal computer 2] a viewing area (area) larger than the display 15 of a portable telephone 1, and each key of the operation input section 22 is large rather than each key switch of the operation input section 12 of a portable telephone 1.

[0036] Although the interrogator 5 serves as the configuration prepared in one with the gestalt of this enforcement at the upper part of the mainframe 20 of a personal computer, of course, it is not limited to this arrangement, and you may be the configuration which makes an interrogator 5 removable to the mainframe 20 of a personal computer further.

[0037] (Outline configuration of a host computer) The host computer 3 is connected with internet or various kinds of information communication networks as communication service which a communication entrepreneur offers. And a host computer 3 offers the various services according to the concerned demand according to the various demands from the parent terminal mentioned above or a child terminal. Here, as various services which a host computer 3 performs, the connection service with the telephone by other cables or radios which serve as a called party, for example, the send-data service which transmits the various data from above-mentioned internet and various above-mentioned information communication networks are included.

[0038] Moreover, the host computer 3 has the authentication section which is not illustrated [which attests whether you are a regular user] based on the authentication information from a parent terminal or a child terminal, and only when it accepts as a regular user in the authentication section, it offers the service according to the demand from a parent terminal or a child terminal. And a host computer 3 has the non-illustrated accounting section, and performs predetermined accounting to the regular user who attested in the aforementioned authentication section.

[0039] Furthermore, a host computer 3 has the transmission-speed allocation section which is not illustrated [which assigns the transmission speed according to the demand from a portable telephone 1 within the limits of this transmission speed to two or more child terminals which the portable telephone 1 chose] while it assigns a predetermined transmission speed (for example, 2Mbpses) beforehand to the portable telephone 1 which is a parent terminal. Further again, a host computer 3 supervises the transmission speed to the host computer 3 of two or more child terminals which the portable telephone 1 and the portable telephone 1 chose, and has the transmission-speed Monitoring Department for adjusting so that the sum of the transmission speed of parents and each child terminal may not exceed the transmission speed (for example, 2Mbpses) which a parent terminal has.

[0040] (Circuit arrangement of a parent terminal) Next, with reference to drawing 2 , the circuit arrangement of the portable telephone 1 and the personal computer 2 are explained. As shown in drawing 2 , the portable telephone mainframe 10 of a portable telephone 1 CPU11 which controls this portable telephone 1 whole, and the operation input section 12 explained by drawing 1 , The transceiver section 13 and the antenna 14 as the 2nd means of communications which communicate with a host computer 3, It has the display 15 and the microphone 16 which were explained by drawing 1 and the loudspeaker 17, the vibrator 18 which vibrates the portable telephone 1 whole, and the memory 19 in which various kinds of informations mentioned later are stored.

[0041] CPU11 of the portable telephone mainframe 10 controls the transceiver section

13, the display 15, the loudspeaker 17, the vibrator 18, and the memory 19 based on the alter operation by the control program about a control of the portable telephone 1 whole, and the operation input section 12. Moreover, it connects with the communications department 41 of the transponder 4 mentioned later, and CPU11 of the portable telephone mainframe 10 controls each part based on the signal inputted from the communications department 41.

[0042] For example, by the portable telephone mainframe 10, if the telephone number of the telephone of a called party which should be connected is inputted based on the alter operation by the operation input section 12, the concerned telephone number will be displayed on a display 15 by control of CPU11, and the radio signal for the line connection with a called party will be transmitted by it, through the antenna 14 connected to the transceiver section 13 and the transceiver section 13. A host computer 3 receives this radio signal transmitted from the portable telephone 1, and performs processing which aims at connection with the telephone of a called party.

[0043] And if the telephone and circuit of a called party are connected, by the portable telephone mainframe 10, by control of CPU11, the vocal sound which the vocal sound from the telephone of a called party is outputted as vocal sound from a loudspeaker 17, and the user by the side of the call origination to this utters is changed into an electrical signal through a microphone 16, and by the transceiver section 13, predetermined processing will be performed and it will be transmitted to the telephone of a called party as a radio signal for a telephone call through the antenna 14 and the host computer 3

[0044] When the radio signal for the line connection transmitted through the host computer 3 by the portable telephone mainframe 10 from the telephone of the other party which becomes a call origination side on the other hand is received in the transceiver section 13 through an antenna 14, by control of CPU11 If arrival-of-the-mail sound is outputted from a loudspeaker 17, or vibrator 18 vibrates according to the established state based on the alter operation of the operation input section 12 and the predetermined key of the operation input section 12 is operated by the user of a called party A circuit is connected a call origination side and it will be in the status in which the telephone call with the telephone of the other party is possible like ****.

[0045] Furthermore, by the portable telephone mainframe 10, if the telephone number to the internet which should be connected is inputted based on the alter operation by the operation input section 12, the concerned telephone number will be displayed on a display 15 by control of CPU11, and the radio signal for the line connection to internet will be transmitted by it, through the antenna 14 connected to the transceiver section 13 and the transceiver section 13. Here, a host computer 3 receives this radio signal transmitted from the portable telephone 1, and performs processing which aims at connection with internet.

[0046] And when internet and a circuit are connected, by the portable telephone mainframe 10, it is stored in memory 19 based on the alter operation by the operation input section 12 about the data which the image data sent from an internet side, the alphabetic data about a mail, etc. are displayed on a display 15 by control of CPU11, and it is outputted from a loudspeaker 17 about voice data, among these an user needs by it.

[0047] The operation input section 12 of the portable telephone mainframe 10 is operated in case various setup in the case of performing the communication with the interrogator 5 of a personal computer 2 through a transponder 4 is performed in addition to this.

[0048] The memory 19 of the portable telephone mainframe 10 memorizes the information about the communication result which mentions later the detail sent from an interrogator 5 side, after performing the communication with the interrogator 5 of a personal computer 2 through a transponder 4.

[0049] Moreover, the data (henceforth a telephone number information) of the telephone number about a portable telephone 1 and the data (henceforth the content information of a control) about the content of a control transferred to a child terminal (personal computer 2) side are stored, each of these informations are read by control of CPU11, and memory 19 is transmitted to the interrogator 5 side of a personal computer 2.

[0050] That is, the transponder 4 of a portable telephone 1 has the communications department 41 which performs transmission and reception of the interrogator 5 of a personal computer 2, and data, CPU11 of the portable telephone mainframe 10 reads the telephone number information and the content information of a control in memory 19, and each [these] information is outputted with the gestalt of a radio signal from the communications department 41 by supplying each [these] information to the communications department 41 with a control signal. In addition, as gestalt of a radio signal, a Hertzian wave, infrared radiation, etc. are usable.

[0051] Furthermore, in the transponder 4 of a portable telephone 1, it precedes transmitting a telephone number information and the content information of a control, and based on a control of CPU11 of the portable telephone mainframe 10, the connection signal for establishing the connection with the interrogator 5 of a personal computer 2 outputs from the communications department 41, and mentions later about this processing.

[0052] (Circuit arrangement of a child terminal) Next, the circuit arrangement of the personal computer 2 by the side of a child terminal are explained. As shown in drawing 2, the mainframe 20 of a personal computer of a personal computer 2 CPU21 which controls this mainframe of personal computer 20 whole, and the operation input section 22 explained by drawing 1, The transceiver section 23 equipped with the modem for transmitting and receiving data by connecting by the host computer 3, the cable, or the radio etc., The display 24 explained by drawing 1, and the hard disk drive 25 in which various data are stored (HDD), It has the interface section (I / F section) 26 for aiming at connection with external instruments, such as a printer, external storage, a card modem, and other personal computers, and the loudspeaker 27 which outputs vocal sound.

[0053] CPU21 of the mainframe 20 of a personal computer controls the transceiver section 23, the display 24, HDD25, the I / F section 26, and the loudspeaker 27 based on the alter operation by a predetermined control program and the predetermined operation input section 22. Moreover, it connects with the communications department 51 of the interrogator 5 mentioned later, and CPU21 of the mainframe 20 of a personal computer controls each part based on the signal inputted from the communications department 51.

[0054] For example, by the mainframe 20 of a personal computer, where the telephone line 28 and the transceiver section 23 which stand in a row to a host computer 3 are connected with a cable, if the telephone number to the internet which should be connected is inputted by the alter operation by the operation input section 22, the concerned telephone number will be displayed on a display 24 by control of CPU21, and the signal for the line connection to internet will be transmitted to a host computer 3 through the transceiver section 23 and the aforementioned telephone line 28. A host

computer 3 will perform processing which aims at connection with internet, if this signal transmitted from the mainframe 2 of a personal computer is received.

[0055] And by the mainframe 20 of a personal computer, when internet and a circuit are connected, about the data which the image data sent from internet through a host computer 3, the alphabetic data about a mail, etc. are displayed on a display 24 by control of CPU21, and are outputted as vocal sound from a loudspeaker 27 about voice data, among these an user needs, it is stored in HDD25 based on the alter operation by the operation input section 22 (down load).

[0056] The operation input section 22 of the mainframe 20 of a personal computer is operated in case various setup in the case of in addition to this performing the communication with the transponder 4 of the cellular-phone machine 1 through the interrogator 5 mentioned later is performed.

[0057] It connects with CPU21 of the mainframe 20 of a personal computer, and the interrogator 5 of a personal computer 2 has the communications department 51 which performs transmission and reception of the transponder 4 of a portable telephone 1, and data.

[0058] In the interrogator 5 of a personal computer 2, based on the control signal outputted from CPU21 of the mainframe 20 of a personal computer, the acknowledge signal for establishing the connection with the transponder 4 of a portable telephone 1 outputs from the communications department 51, and mentions later about this processing.

[0059] (Transfer of the control to a child terminal from a parent terminal) two or more personal computer 2A whose portable telephones 1 which are a parent terminal in the portable telephone 1 and the personal computer 2 which were considered as such a configuration are child terminals, 2B, and ... by transferring a control as follows 2n, so to speak, each personal computer 2 executes by proxy processing which a portable telephone 1 originally performs, or a portable telephone 1 and each personal computer 2 communicate with a host computer 3 simultaneously

[0060] Hereafter, processing of this control transfer is explained with reference to the flow chart of drawing 3. in addition, personal computer 2A of the transponder 4 of a portable telephone 1 and a plurality, 2B, and ... it is a flow chart for explaining processing performed between each 2n interrogator 5 and the host computer 3 [drawing 3]

[0061] With the gestalt of this enforcement, first, the transponder 4 of a portable telephone 1 is close brought into predetermined distance to each personal computers [2A-2n] interrogator 5, and the predetermined key switch of the operation input section 12 is pushed. At this time, a connection signal is transmitted from the communications department 41 of a transponder 4 in a portable telephone 1, and each personal computers 2A-2n as a child terminal receive the connection signal from the portable telephone 1 which is a parent terminal (step S1).

[0062] At the following step S2, personal computers 2A-2n transmit an acknowledge signal to a portable telephone 1. this acknowledge signal -- each personal computer 2 -- it considers as the signal which is different every A-2n, respectively, for example, is made to include a child ID information peculiar to the concerned personal computer 2 Here, a host computer 3 is an identifiable information, for example, a child ID information peculiar to the concerned personal computer 2 is an information about the bank account of the information about the part number of a personal computer 2, the information about

the owner of a personal computer 2, and the owner of a personal computer 2 etc. Moreover, when it has the telephone number with the concerned original personal computer 2, you may include the information about the telephone number.

[0063] The portable telephone 1 which received this acknowledge signal from each personal computers 2A-2n is the following step S3, it urges an user to operate the operation input section 12, shifts to step S4, and waits for the input of the operation input section 12 so that the list about each child terminal (personal computers 2A-2n) may be displayed on a display 15 and the child terminal used as the object which transfers a control may be chosen. In addition, this example explains the case where personal computers [each / 2A-2n] all are chosen in the operation input section 12.

[0064] If the input of the operation input section 12 is performed by step S4 and selection of a child terminal is performed, it will shift to step S5 and only a selected number of a child terminal of parts will publish child terminal ID. This child terminal ID is taken as ID which can recognize that the portable telephone 1 whose host computer 3 is a parent terminal publishes, and can discriminate each of two or more child terminals. Suppose that a telephone number information which serves as the telephone number which added the predetermined sign to the telephone number of the portable telephone 1 which is a parent terminal, and is different for every child terminal as a child terminal ID is published with the gestalt of this enforcement.

[0065] To the 2nd set of "090-1234-5678 -01" and child terminals, it is [as opposed to / the 1st set of a child terminal / when the telephone number of a portable telephone 1 is specifically "090-1234 -5678"] "090-1234-5678 -02"... A branch number number is added and assigned.

[0066] In addition, if it is ID which can recognize that the portable telephone 1 whose host computer 3 is a parent terminal publishes as gestalt of enforcement of child terminal ID, and can discriminate each of two or more child terminals, it will not be restricted to this.

[0067] At the following step S6, the telephone number information as a generated child terminal ID is individually transmitted to each child terminal. With the gestalt of this enforcement, the authentication information on the portable telephone 1 which is a parent terminal, and the content information of a control about the content of a control transferred to a child terminal are individually transmitted to each child terminal with a telephone number information by step S6. Here, with the authentication information on a portable telephone 1, it considers as the password information which the user of a portable telephone 1 set up, and the user of a portable telephone 1 considers as the information which can be changed suitably by operation of the operation input section 12.

[0068] In addition, in this example, it shall consider as the control which accesses to the internet which is an information communication network, and downloads predetermined charged data as content of a control transferred to each personal computers 2A-2n, and the content information of a control which shows the purport which transfers this content of a control shall be transmitted to each personal computers [2A-2n] communications department 51 from the communications department 41 of a portable telephone 1. Here, the content information of a control is stored in memory 19, displays the list on the display 15 of a portable telephone 1 in advance of sending, when an user chooses from the list as which the operation input section 12 is operated and it was displayed, reads the information to which CPU11 corresponds from memory 19, and transmits it as a radio

signal from the communications department 41 of a transponder 4.

[0069] Although the same content information of a control is transmitted to each personal computers 2A-2n in this example in order to transfer the same content of a control to each personal computers 2A-2n which are child terminals, the content different for every child terminal of a control may be transferred, and the content information of a control which is mutually different to personal computers 2A-2n in that case will be transmitted. For example, the content information of a control which is different to each personal computers 2A-2n, respectively is transmitted by operation of the operation input section 12 to set up the transmission speed which is mutually different to personal computers 2A-2n. Moreover, the content information different only to personal computer 2A of a control is transmitted by operation of the operation input section 12 to set up only the transmission speed which personal computer 2A uses, for example.

[0070] If the signal including the telephone number information, the authentication information, and the content information of a control from a portable telephone 1 is received at step S7, each personal computers 2A-2n are the following step S8, will add the aforementioned child ID information to each [these] information, and will transmit it to a host computer 3. If each information from each personal computers 2A-2n is received by step S9, a host computer 3 is the following step S10, and the aforementioned authentication section will be step S11 which attests and continues by collating a telephone number information and an authentication information, and it will perform processing which connects each child terminal (personal computers 2A-2n) and internet.

[0071] Here, by the aforementioned transmission-speed allocation section, when the information on a purport that transmission speed is specified to be the content information of a control received from each personal computers 2A-2n is included, a host computer 3 assigns transmission speed to each personal computers 2A-2n so that each personal computers 2A-2n may communicate at the specified concerned speed.

[0072] And after this, a host computer 3 supervises the connection status of each personal computers 2A-2n and internet at the aforementioned transmission-speed Monitoring Department, it supervises it so that the sum of the transmission speed which is communicating with each personal computers 2A-2n may not exceed the transmission speed (for example, 2Mbpses) which a parent terminal has, and when it exceeds, it adjusts.

[0073] Here, as the adjustment technique when the sum of the transmission speed which is communicating with each personal computers 2A-2n exceeds the transmission speed (for example, 2Mbpses) which the portable telephone 1 as a parent terminal has, a host computer 3 is adjusted at the aforementioned transmission-speed Monitoring Department so that it may decrease according to the rate of the transmission speed currently used in each transceiver section 23 of each n personal computers 2A-2n. Moreover, as other adjustment technique, a host computer 3 is adjusted so that the transmission speed about the personal computer 2 with which transmission speed is not specified from a portable telephone 1 in the case of a transfer of the control to each n personal computers 2A-2n (in the case of sending of the content information of a control) may be reduced.

[0074] Furthermore, a host computer 3 performs accounting in the aforementioned accounting section so that the user who has the royalty of the telephone number of a portable telephone 1 may be burdened with the connection charge gold (telephone rate) to the connection with the internet about each personal computers 2A-2n.

[0075] And each personal computers 2A-2n perform the control which downloads predetermined charged data to HDD25 of each mainframe 20 of a personal computer at continuing step S12. By this, the user who has the royalty of the telephone number of a portable telephone 1 will be burdened with the service charge gold (accounting) to a down load of charged data by the accounting section of a host computer 3.

[0076] After processing of a down load is completed, it transmits to the transponder 4 of a portable telephone 1, a series of processing ends the radio signal which included the various informations about a communication result at step S13, and the control transfer to each personal computers 2A-2n ends the personal computers [each / 2A-2n] interrogator 5 from a portable telephone 1. Here, as an information about a communication result, the information about the communication time which is a connect time to internet, a telephone rate, the service charge gold (accounting) to a down load of charged data, the down-load amount of data, etc. is included, for example.

[0077] In addition, the user of a portable telephone 1 is made to perform predetermined operation in the operation input section 12 to end these processings by each personal computers 2A-2n on the way. If the control transfer termination signal of the purport which stops a control transfer from the communications department 41 of a transponder 4 is transmitted by this operation based on a control of CPU11 of a portable telephone 1 and the communications department 51 which are each personal computers 2A-2n receives this Based on a control of CPU21, the command of a connection end is transmitted to a host computer 3 from the transceiver section 23, and the control transfer to each personal computers 2A-2n is completed from a portable telephone 1 by cutting the connection with internet by processing of a host computer 3.

[0078] With the gestalt of this enforcement, it is canceled from the burden which becomes unnecessary to set up the peculiar telephone number to each personal computers 2A-2n by the side of a child terminal, and pays the minimum charge about the royalty of the new telephone number by performing such a control transfer to two or more child terminals from a parent terminal.

[0079] Moreover, about the connection with the host computer 3 and internet, even if it is the case where the telephone number peculiar to each personal computers 2A-2n by the side of a child terminal is set up, since it is carried out nothing with regards to a setup of the concerned telephone number based on the telephone number of the portable telephone 1 by the side of a parent terminal, in advance of connection, it is not necessary to change a setup of the telephone number by the side of each personal computer 2A-2n. Namely, even if who a personal computers [which are child terminals / each / 2A-2n] owner is according to the gestalt of this enforcement Accounting about a telephone rate or service charge gold will be imposed to the user of the portable telephone 1 by the side of a parent terminal. for example, even when each personal computers 2A-2n are installed in the locations (for example, showroom etc.) where many and unspecified men gather It is enabled to carry out accounting of the telex-rate gold which acquisition of a specific service took, the service-provision tariff, etc. pertinently to a personal computers [each / 2A-2n] user (for it to be the user of a portable telephone 1 in this case) etc. irrespective of a personal computers [each / 2A-2n] possession name.

[0080] Moreover, since the data to download are saved at each personal computers [by the side of a child terminal / 2A-2n] HDD25, it is not necessary to enlarge storage capacity of memory 19 in the portable telephone 1 by the side of a parent terminal, and

since it is not necessary to increase the capacity of a non-illustrated power cell, it is enabled to maintain small [of equipment], and lightweight-ization. Furthermore, since the downloaded data are read from HDD25 and displayed by the display 24 of the mainframe 20 of a personal computer, in the portable telephone 1 by the side of a parent terminal, there is no need of enlarging area of the display 15 of the portable telephone mainframe 10, and it is enabled to maintain small [of equipment], and lightweight-ization.

[0081] Further again, since there are few amounts of the data exchanged by the transponder 4 by the side of a parent terminal and the interrogator 5 by the side of a child terminal, it is enabled to constitute the communications departments 41 and 51 in transponder 4 and interrogator 5 both sides using a simple interface.

[0082] In addition, although the gestalt of enforcement mentioned above explained the example for which the transceiver section 23 of the personal computer 2 by the side of a child terminal downloads the data from internet through a cable signal from a host computer 3, when each child terminal downloads data through a radio signal, it is possible to carry out by the same processing.

[0083] Although the gestalt of enforcement mentioned above explained the example which made the configuration of a parent terminal the portable telephone 1 which consists of a transponder 4 and a portable telephone mainframe 10, the configuration by the side of a parent terminal cannot be limited to this, and a transponder 4 can attach it, or it can be applied to the various terminals which can be built in. A transponder 4 attaches or it can apply as a terminal which can be built in suitable for various mobile communication terminals, such as PHS (Personal Handyphone System) or PDA (Personal Digital Assistant). Moreover, with the gestalt of enforcement mentioned above, since a parent terminal side does not need to communicate with a host computer 3, as a configuration of a parent terminal, it is suitably applicable also to a product like the so-called remote controller or an IC card.

[0084] In addition, it is an example when the portable telephone 1 of a parent terminal transfers all of the transmission speed (2Mbps) which oneself has with the gestalt of enforcement mentioned above to the personal computers 2A-2n which are child terminals. In this case, during a communication of the personal computers 2A-2n which are child terminals, since the transmission speed which oneself has is lost, the communication of the portable telephone 1 of a parent terminal to the host computer 3 by the transceiver section 13 and the antenna 14 of a portable telephone 1 becomes impossible.

[0085] The portable telephone 1 is able to transfer a part of transmission speed (2Mbps) (for example, 1Mbps) which oneself has to personal computers 2A-2n. on the other hand, in this case It is enabled to perform the communication to a host computer 3 simultaneously with the portable telephone 1 of a parent terminal, and the personal computers 2A-2n of a child terminal, and is enabled to perform data communication through the host computer 3 of a portable telephone 1 and personal computers [2A-2n] between etc.

[0086] In addition, it is possible to carry out by the same processing as **** in this case to the portable telephone 1 and the personal computers 2A-2n about the accounting by monitoring of the transmission speed by authentication by the aforementioned authentication section of a host computer 3, assignment of the transmission speed by the

aforementioned transmission-speed allocation section, and the aforementioned transmission-speed Monitoring Department and adjustment, and the aforementioned accounting section.

[0087] Although the gestalt of enforcement mentioned above explained the example which used the configuration of a child terminal as the personal computer 2 which consists of an interrogator 5 and a mainframe 20 of a personal computer, the configuration by the side of a child terminal cannot be limited to this, and an interrogator 5 can attach it, or it can be applied to the various electric appliances which can be built in.

[0088] An interrogator 5 attaches, as an example of the various electric appliances which can be built in Not to mention the portable telephone which has the same configuration as the parent terminal 1, television, Radio, a camera, the record regenerative apparatus of a picture image or voice, an air conditioning machine (air-conditioner), Home use, such as a microwave oven and facsimile apparatus, or the electronic equipment for offices, By mentioning the public common device used for many and unspecified persons still like various vending machines, and giving the communication facility to a host computer 3 to these various electric appliances Various services can be received through a host computer 3, without setting up the original telephone number etc.

[0089] The content of the control transferred from a parent terminal to a child terminal is not limited to an above-mentioned example, and when a child terminal is [for example,] a portable telephone, it wears and it can transfer [the control only for arrival of the mail, the control only for dispatch, and] a control of both sides of dispatch etc.

[0090] Moreover, although [the gestalt of above-mentioned enforcement] transmission and reception of the data between a parent terminal and a child terminal are performed through a radio signal, it is not limited to this but, of course, you may carry out through a cable signal.

DESCRIPTION OF DRAWINGS

[An easy explanation of a drawing]

[Drawing 1] It is drawing explaining the schema of the gestalt of enforcement of the control transfer system of the telephone line which applied this invention.

[Drawing 2] It is a block diagram for explaining the portable telephone (parent terminal) of drawing 1 , and the circuit arrangement of a personal computer (child terminal).

[Drawing 3] It is a flow chart for explaining processing performed when a parent terminal transfers a control to each child terminal.

[An explanation of a sign]

1 Portable Telephone (Parent Terminal)

2 Personal Computer (Child Terminal)

3 Host Computer

4 Transponder

41 Communications Department (1st Means of Communications)

10 Portable Telephone Mainframe

11 CPU (Control Means)

12 Operation Input Section (Operation Input Means)

13 Transceiver Section (2nd Means of Communications)

14 Antenna

15 Display (Display Means)

16 Microphone

17 Loudspeaker

18 Vibrator

19 Memory

20 Mainframe of Personal Computer

21 CPU (Control Means)

22 Operation Input Section

23 Transceiver Section (2nd Means of Communications)

24 Display

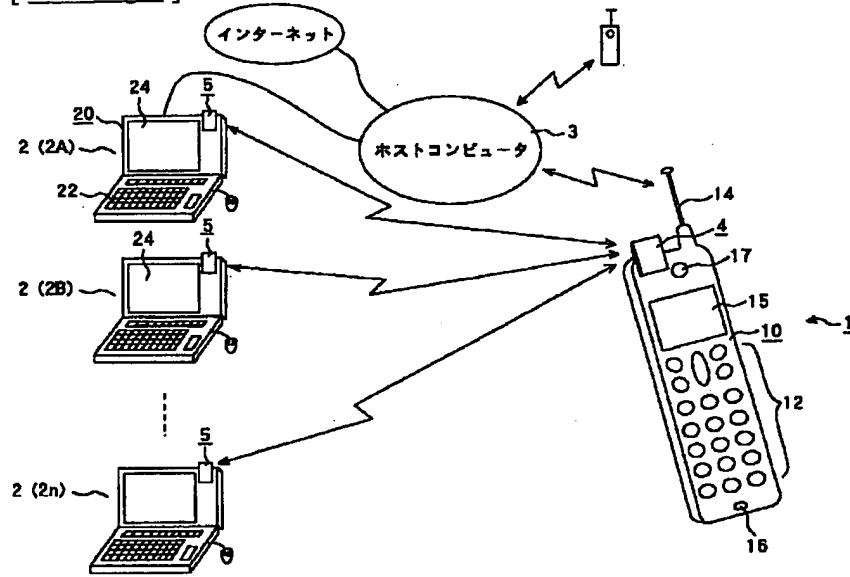
25 HDD

5 Interrogator

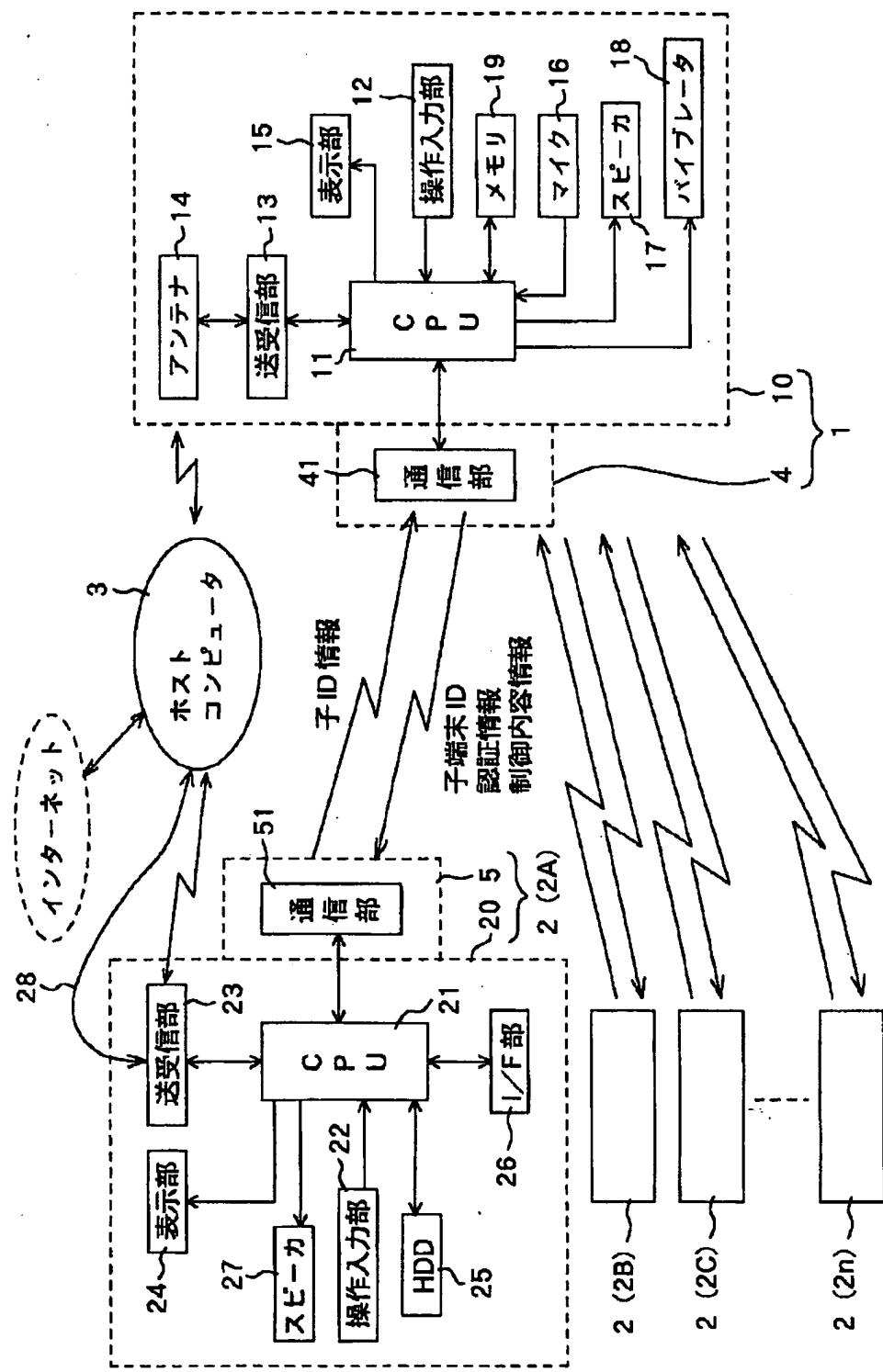
51 Communications Department (1st Means of Communications)

DRAWINGS

[Drawing 1]



[Drawing 2]



[Drawing 3]

